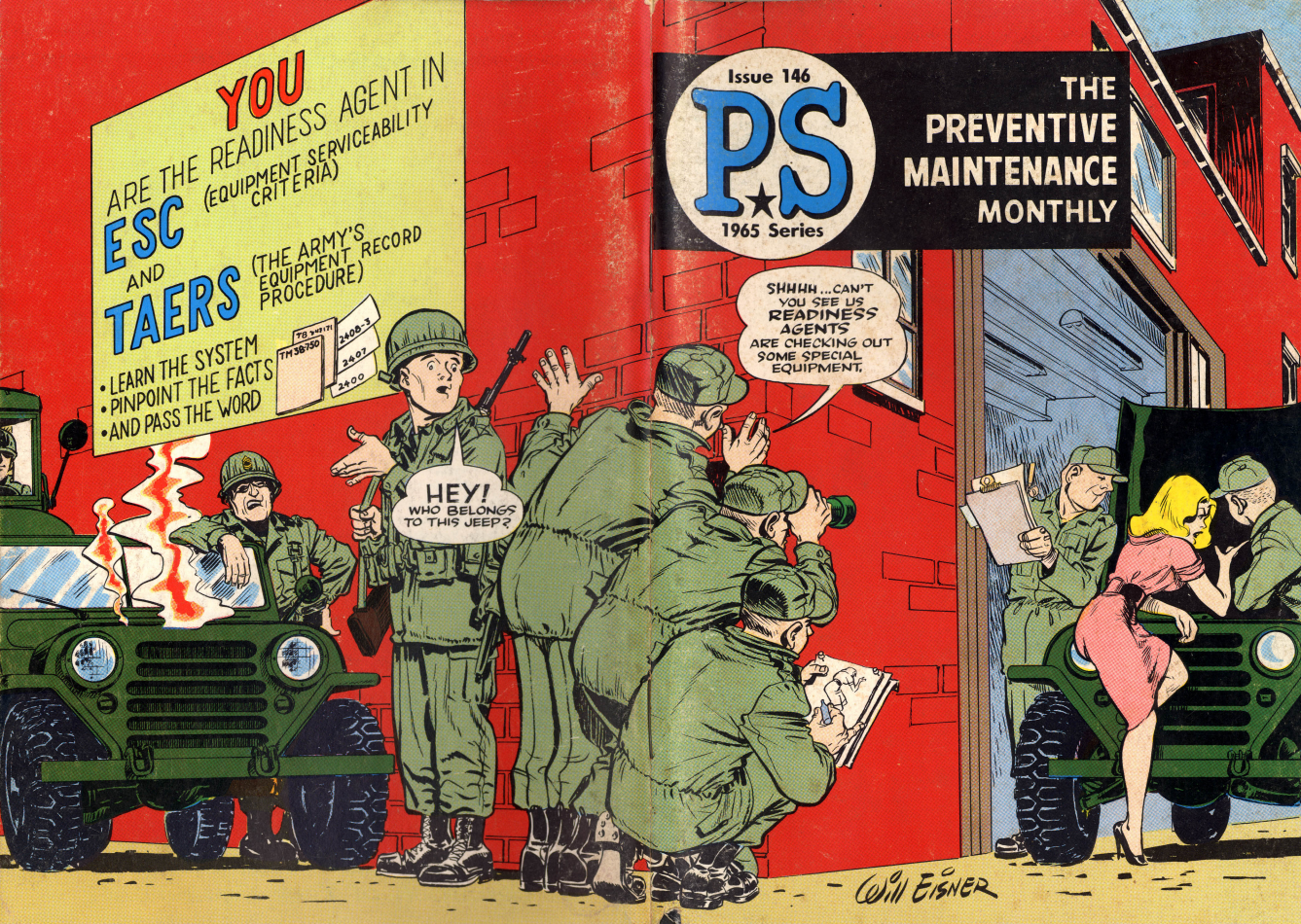
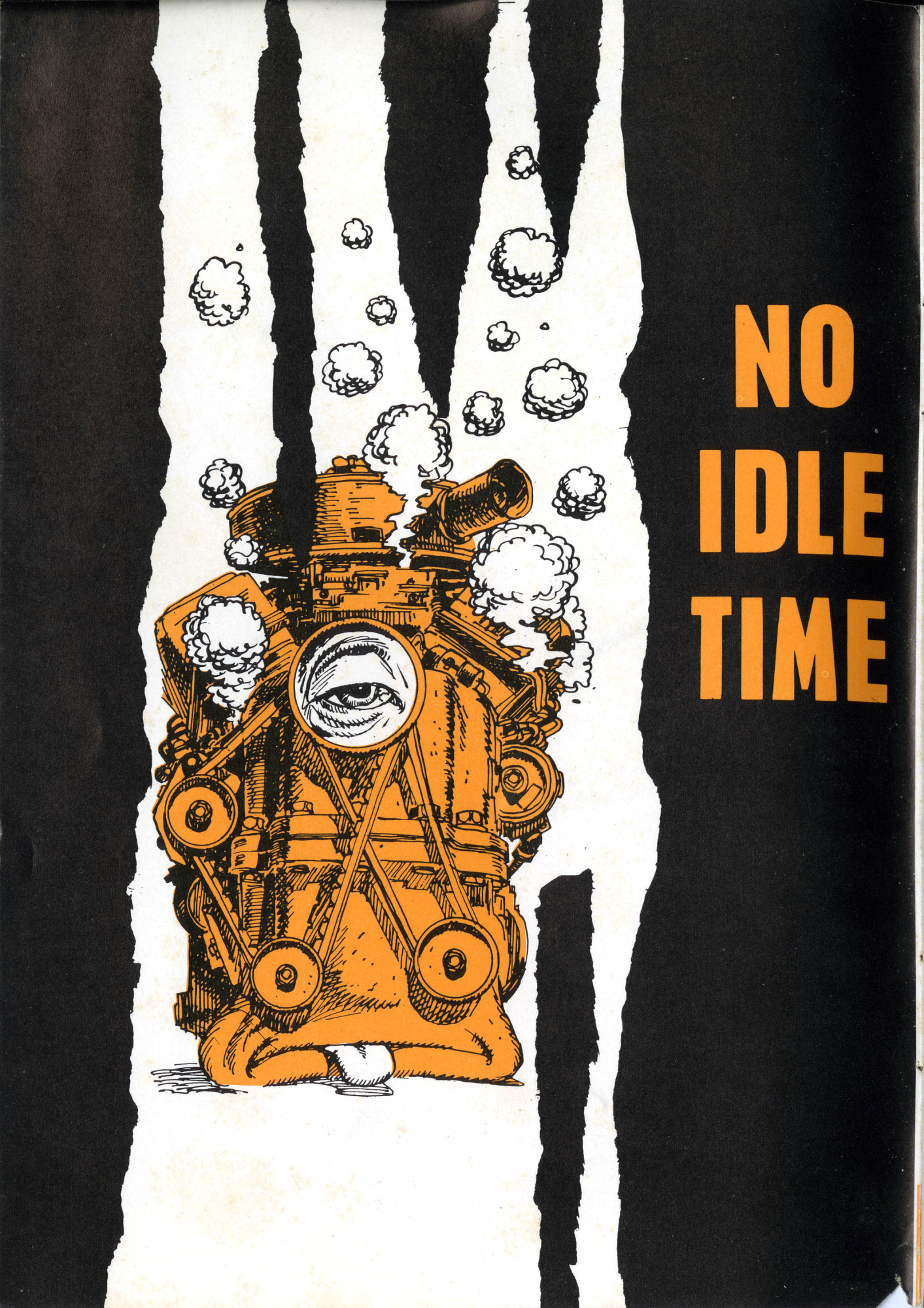
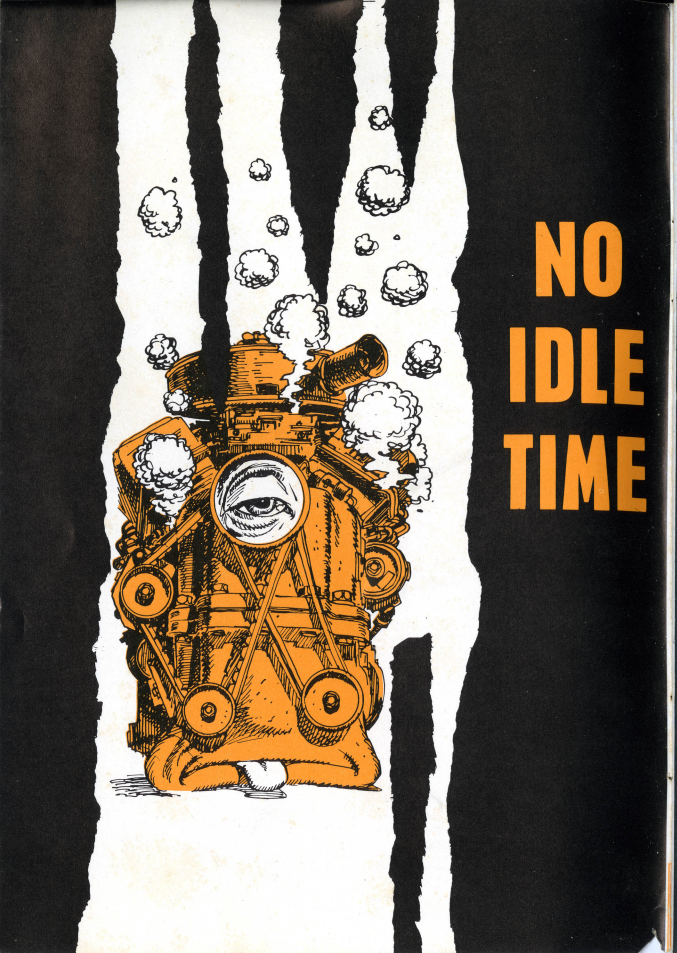
Issue 146
P.S
1965 Series
THE PREVENTIVE MAINTENANCE MONTHLY
SHHHH...CAN'T YOU SEE US READINESS AGENTS ARE CHECKING OUT SOME SPECIAL EQUIPMENT.
Will Eisner


YOU
ARE THE READINESS AGENT IN
ESC (EQUIPMENT SERVICEABILITY CRITERIA)
AND
TAERS (THE ARMY'S EQUIPMENT RECORD PROCEDURE)
• LEARN THE SYSTEM
• PINPOINT THE FACTS
• AND PASS THE WORD
TM 38-750
2408-3
2407
2400
HEY! WHO BELONGS TO THIS JEEP?
SHHHH ... CAN'T YOU SEE US READINESS AGENTS ARE CHECKING OUT SOME SPECIAL EQUIPMENT.
Issue 146
P.S
1965 Series
THE PREVENTIVE MAINTENANCE MONTHLY
© Will Eisner


NO
IDLE
TIME



# NO IDLE TIME

When you spot an engine idling . . . you spot serious engine trouble in the making.

It may not show at the moment, but a lot of idling chugs-up costly and uncalled for maintenance problems. It's not only hard on trucks . . . it's rough on tanks, generators, tractors . . . anything with an engine.

Letting your vehicle idle, for example, may save you a couple of seconds when you hop back in (or keep you toasty warm while you wait), but maintenance records prove that the practice guarantees—

- Low oil pressure...not enough lubrication.
- Sludge in the engine oil (with its serious mischief.)
- Fouled spark plugs.
- Electrical system problems.
- Wasted fuel.

In addition to deadlining your equipment, tying up your maintenance friends and equipment and using up money, leaving a parked vehicle idling can get you in other kinds of trouble . . . like if the MP's are in the neighborhood.

So make a note somewhere handy . . . like on the tip of your nose. **No unnecessary idling.**

Just remember . . . the engine you operate today is your combat fighting gear tomorrow . . . IF—.


PS

Published by the Department of the Army for the information of organizational maintenance and supply personnel. Distribution is made through normal publication channels. Within limits of availability, older issues may be obtained direct from U. S. Army Maintenance Board, Attn: PS Magazine, Fort Knox, Kentucky 40121.

THE **PREVENTIVE MAINTENANCE** MONTHLY

Issue No. 146 1965 Series


## IN THIS ISSUE


**FIREPOWER 2-17**

Special Feature—Be Your Own Inspector . . . M85 Machine Gun 2-17

**GROUND MOBILITY 18-27**

Lube points 18
M151 18, 19
M38A1 19
G741-Series Truck 20, 21
M543 Wrecker 22
M116 Cables 22
M88 VTR 22
24-Volt Tester 23
M17 BIC Rangefinder 27
Save Your Scope 27
Special Feature—Be Your Own Inspector . . . Combat Crewman's Helmet 24-26

**AIR MOBILITY 37-47**

Special Feature—Refueling Harmony 37-45
Easy on Paint Jobs 46-47

**COMMUNICATIONS 48-57**

AN/ARC-51 48, 49
AN/GRA-39 50-52
VRQ-3 52
AN/USM-81 53
Tape Talk 54, 55
AN/GRC-50 56
SB-22 56
Vent The Shelter 57

**GENERAL AND SUPPLY**

Life Preservers 58, 59
Bridge Numbers 60
Gasoline Lantern 61
MIG Sets 62, 63
DA Form 314 Template 64
Publications 28
Supply 16, 19, 20, 21, 22, 23, 27, 52, 53, 54, 56

Use of funds for printing of this publication has been approved by Headquarters, Department of the Army, 4 April 1962. DISTRIBUTION: In accordance with requirements submitted on DA Form 12-4.


PS wants your ideas and contributions, and is glad to answer your questions. Name and address are kept in confidence. Just write to:

Sgt. Half-Mast,
PS Magazine,
Fort Knox, Ky.
40121

When you spot an engine idling . . . you spot serious engine trouble in the making.

It may not show at the moment, but a lot of idling chugs-up costly and uncalled for maintenance problems. It's not only hard on trucks . . . it's rough on tanks, generators, tractors . . . anything with an engine.

Letting your vehicle idle, for example, may save you a couple of seconds when you hop back in (or keep you toasty warm while you wait), but maintenance records prove that the practice guarantees—

- Low oil pressure...not enough lubrication.
- Sludge in the engine oil (with its serious mischief.)
- Fouled spark plugs.
- Electrical system problems.
- Wasted fuel.

In addition to deadlining your equipment, tying up your maintenance friends and equipment and using up money, leaving a parked vehicle idling can get you in other kinds of trouble . . . like if the MP's are in the neighborhood.

So make a note somewhere handy . . . like on the tip of your nose. **No unnecessary idling.**

Just remember . . . the engine you operate today is your combat fighting gear tomorrow . . . IF—.


# PS

**Published by the Department of the Army for the Information of organizational maintenance and supply personnel.** Distribution is made through normal publication channels. Within limits of availability, older issues may be obtained direct from U. S. Army Maintenance Board, Attn: PS Magazine, Fort Knox, Kentucky 40121.

THE **PREVENTIVE MAINTENANCE** MONTHLY

Issue No. 146 1965 Series


## IN THIS ISSUE

### FIREPOWER 2-17

Special Feature—Be Your Own Inspector . . . M85 Machine Gun 2-17

### GROUND MOBILITY 18-27

Lube points 18
M151 18, 19
M38A1 19
G741-Series Truck 20, 21
M543 Wrecker 22
M116 Cables 22
M88 VTR 22
24-Volt Tester 23
M17 BIC Rangefinder 27
Save Your Scope 27
Special Feature—Be Your Own Inspector . . . Combat Crewman's Helmet 24-26

### AIR MOBILITY 37-47

Special Feature—Refueling Harmony 37-45
Easy on Paint Jobs 46-47

### COMMUNICATIONS 48-57

AN/ARC-51 48, 49
AN/GRA-39 50-52
VRQ-3 52
AN/USM-81 53
Tape Talk 54, 55
AN/GRC-50 56
SB-22 56
Vent The Shelter 57

### GENERAL AND SUPPLY

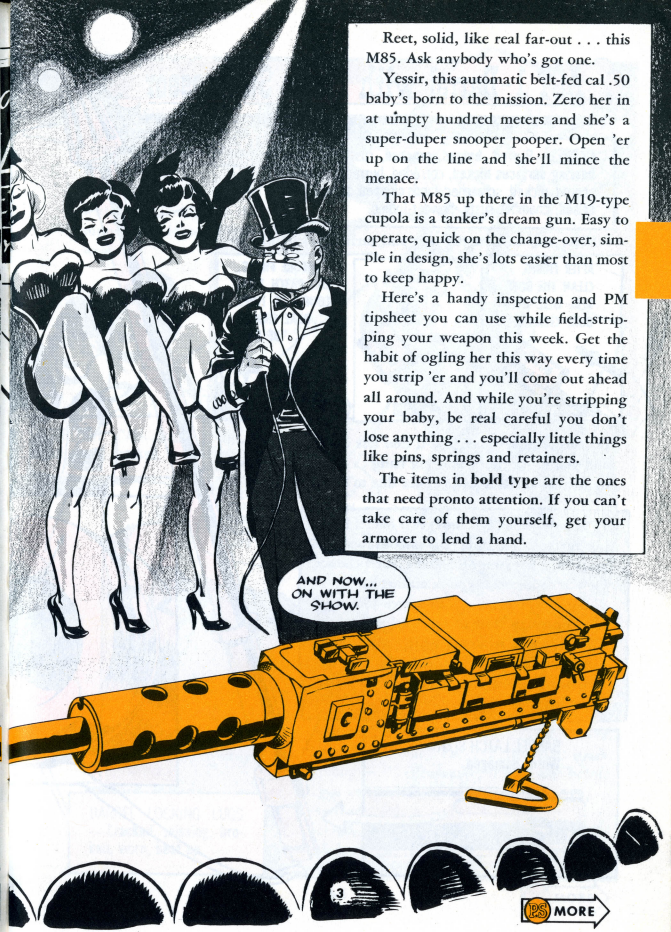
Life Preservers 58, 59
Bridge Numbers 60
Gasoline Lantern 61
MIG Sets 62, 63
DA Form 314 Template 64
Publications 28
Supply 16, 19, 20, 21, 22, 23, 27, 52, 53, 54, 56

Use of funds for printing of this publication has been approved by Headquarters, Department of the Army, 4 April 1962. DISTRIBUTION: In accordance with requirements submitted on DA Form 12-4.


PS wants your ideas and contributions, and is glad to answer your questions. Name and address are kept in confidence. Just write to:

Sgt. Half-Mast,
PS Magazine,
Fort Knox, Ky.
40121

FIREPOWER
Presents
BE YOUR OWN INSPECTOR...
M85
MACHINE GUN
FEATURING
12 SUB-ASSEMBLIES 12




Reet, solid, like real far-out . . . this M85. Ask anybody who's got one.

Yessir, this automatic belt-fed cal .50 baby's born to the mission. Zero her in at umpty hundred meters and she's a super-duper snooper pooper. Open 'er up on the line and she'll mince the menace.

That M85 up there in the M19-type cupola is a tanker's dream gun. Easy to operate, quick on the change-over, simple in design, she's lots easier than most to keep happy.

Here's a handy inspection and PM tipsheet you can use while field-stripping your weapon this week. Get the habit of ogling her this way every time you strip 'er and you'll come out ahead all around. And while you're stripping your baby, be real careful you don't lose anything . . . especially little things like pins, springs and retainers.

The items in **bold type** are the ones that need pronto attention. If you can't take care of them yourself, get your armorer to lend a hand.



DO PS MORE

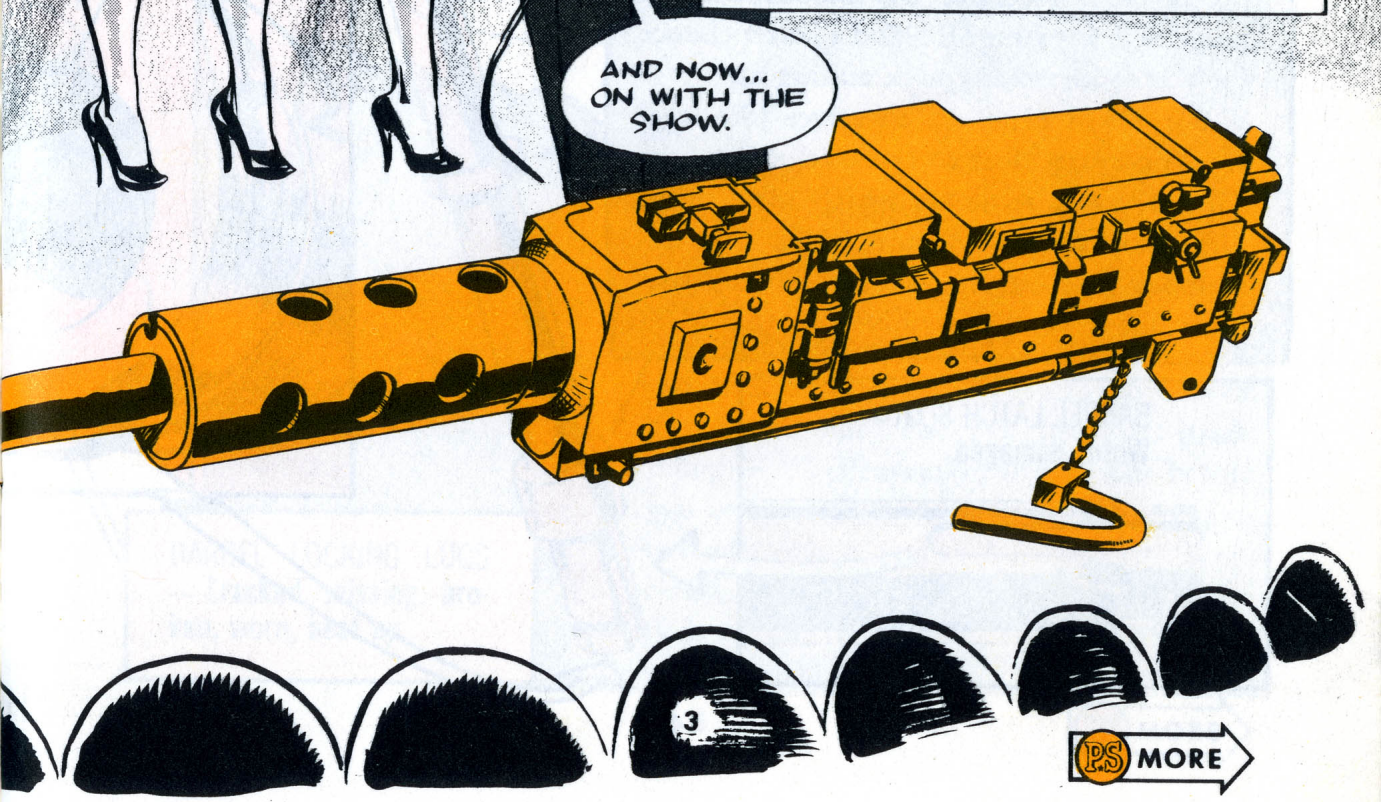
Reet, solid, like real far-out . . . this M85. Ask anybody who's got one.

Yessir, this automatic belt-fed cal .50 baby's born to the mission. Zero her in at umpty hundred meters and she's a super-duper snooper pooper. Open 'er up on the line and she'll mince the menace.

That M85 up there in the M19-type cupola is a tanker's dream gun. Easy to operate, quick on the change-over, simple in design, she's lots easier than most to keep happy.

Here's a handy inspection and PM tipsheet you can use while field-stripping your weapon this week. Get the habit of ogling her this way every time you strip 'er and you'll come out ahead all around. And while you're stripping your baby, be real careful you don't lose anything . . . especially little things like pins, springs and retainers.

The items in **bold type** are the ones that need pronto attention. If you can't take care of them yourself, get your armorer to lend a hand.



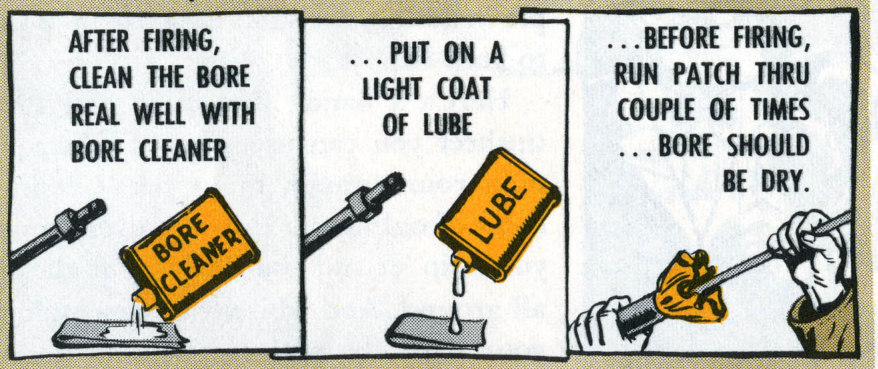



PS MORE

# ACT 1-Barrel with Flash Suppressor

BARREL—Burred, **bulged, cracked,** rusty, dirty; **bearing surfaces nicked,** corroded, burred; rifling scored, nicked, scratched; **lands chipped, stripped, raised;** chamber rusty, powder-fouled.

The way to beat the rust and carbon hex is like so:

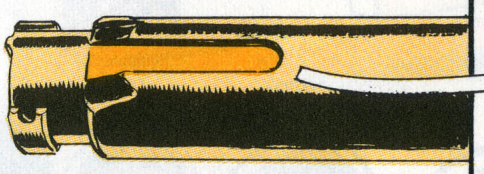



Do this regularly and you'll find less carbon deposits—and you'll get rid of that big bang . . . the bang caused by increased chamber pressure due to oil in the bore.

Be sure you check those two barrel bearing surfaces. Keeping 'em smooth means a longer life for your M85 and a better chance for you to hit what you're aiming at.

But, don't ever use abrasives like steel wool or emery cloth or crocus cloth on 'em. These'll cause scratches which wind up as dirt traps and mean more wear. Just remember that the smaller the bearing surfaces, the greater the whip!

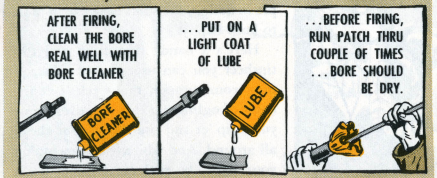
BARREL LATCH SLOT—
Worn, **damaged.**



# ACT 1–Barrel with Flash Suppressor

BARREL—Burred, **bulged, cracked,** rusty, dirty; **bearing surfaces nicked,** corroded, burred; rifling scored, nicked, scratched; **lands chipped, stripped, raised;** chamber rusty, powder-fouled.

The way to beat the rust and carbon hex is like so:

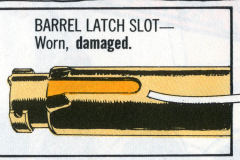



Do this regularly and you'll find less carbon deposits—and you'll get rid of that big bang . . . the bang caused by increased chamber pressure due to oil in the bore.

Be sure you check those two barrel bearing surfaces. Keeping 'em smooth means a longer life for your M85 and a better chance for you to hit what you're aiming at.

But, don't ever use abrasives like steel wool or emery cloth or crocus cloth on 'em. These'll cause scratches which wind up as dirt traps and mean more wear. Just remember that the smaller the bearing surfaces, the greater the whip!

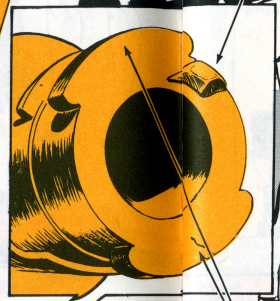
BARREL LATCH SLOT—Worn, **damaged.**



FLASH SUPPRESSOR—Loose; **prongs and base cracked.**

Incidentally, swap barrels with your armorer if the suppressor's loose on your weapon.

INTERLOCK CAM—**Damaged,** worn, **cracked.**



BARREL LOCKING LUGS—**Cracked, missing, broken,** worn, **beat up.**

A busted or missing barrel locking lug can cause a stop-fire PDQ . . . as more'n one guy found out. There're two sure-cures, though—PI (Preventive Inspection) before you assemble it, and PM (Preventive Maintenance) while you're handling it. Especially, don't toss the barrel assembly in the rack or use the locking lug end of it for stomping things.





MORE

Incidentally, swap barrels with your armorer if the suppressor's loose on your weapon.

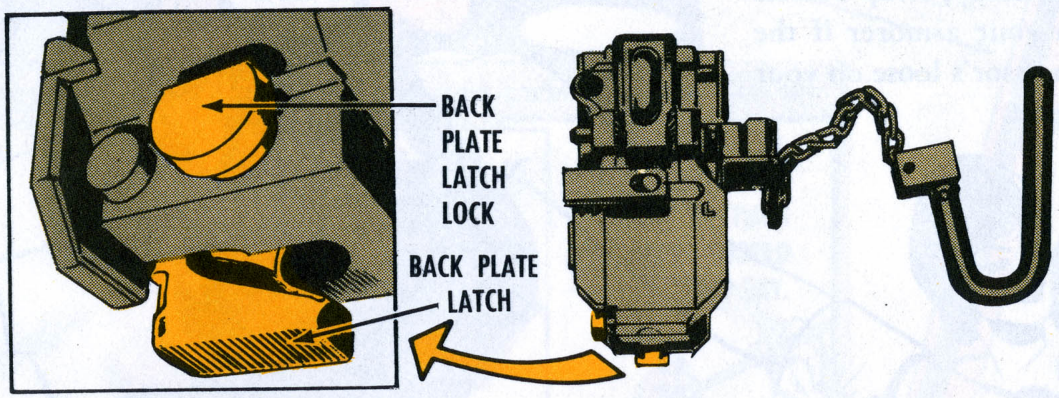
A busted or missing barrel locking lug can cause a stop-fire PDQ . . . as more'n one guy found out. There're two sure-cures, though—PI (Preventive Inspection) before you assemble it, and PM (Preventive Maintenance) while you're handling it. Especially, don't toss the barrel assembly in the rack or use the locking lug end of it for stomping things.



P.S. MORE

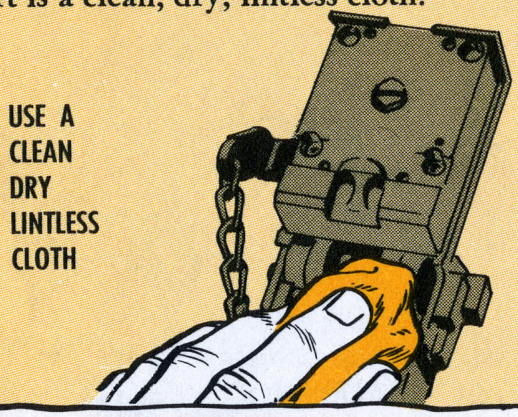
# ACT 2-Back Plate Group

BACK PLATE ASSEMBLY—Parts loose, **missing,** rusty, cracked, dirty; solenoid plunger and striker springs weak, sluggish; ball detents missing on quick release pins; firing rate selector works hards; **latch and lock won't work right.**

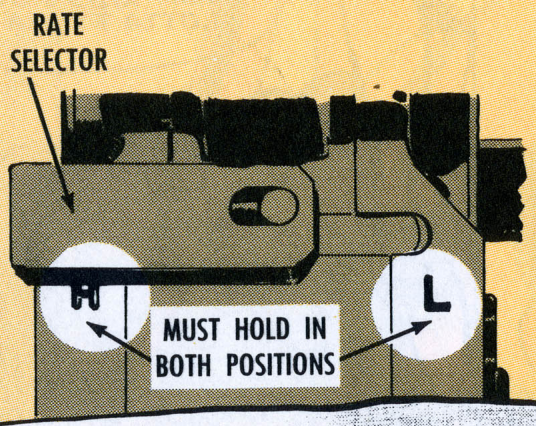



TRIGGER EXTENSION ASSEMBLY—**Extension hook bent, cracked; chain links broken;** won't work the trigger the way it should; worn, rusty.

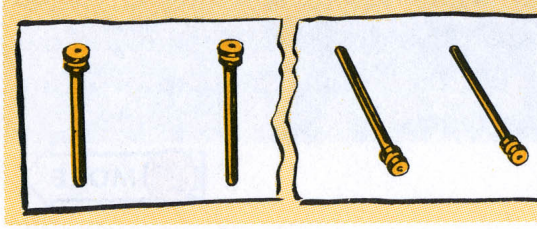
Watch that solenoid. Don't oil it and don't use any dry-cleaning solvent, CR or any other kind of cleaner on it. About all you can use to get rid of grease and dirt is a clean, dry, lintless cloth.




Check the rate selector to see that it holds in both the "H" and "L" positions and make sure the low rate striker turns when you move the selector.




The way your M85's mounted in the cupola it's easier to pull the pins out from the left side. So, when you're putting 'em back in, always push 'em in from the left.

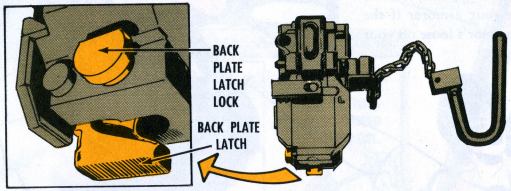


QUICK RELEASE PINS—Cracked, burred, rough edged, dirty, bent.

M85 ACT 2 REVUE

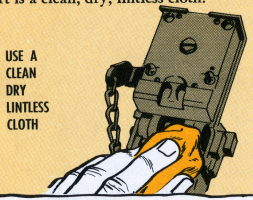
# ACT 2-Back Plate Group

BACK PLATE ASSEMBLY—Parts loose, **missing,** rusty, cracked, dirty; solenoid plunger and striker springs weak, sluggish; ball detents missing on quick release pins; firing rate selector works hards; **latch and lock won't work right.**

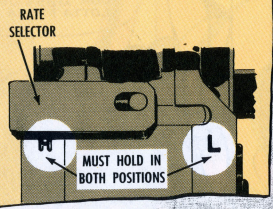



TRIGGER EXTENSION ASSEMBLY—**Extension hook bent, cracked; chain links broken;** won't work the trigger the way it should; worn, rusty.

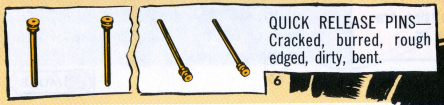
Watch that solenoid. Don't oil it and don't use any dry-cleaning solvent, CR or any other kind of cleaner on it. About all you can use to get rid of grease and dirt is a clean, dry, lintless cloth.



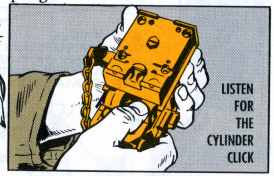

Check the rate selector to see that it holds in both the "H" and "L" positions and make sure the low rate striker turns when you move the selector.




The way your M85's mounted in the cupola it's easier to pull the pins out from the left side. So, when you're putting 'em back in, always push 'em in from the left.

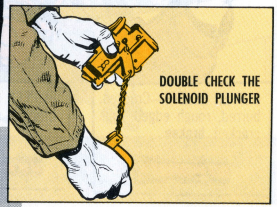


Put your educated thumb to work to check out the cylinder. When you rotate it, **and then let it go,** you should hear a definite metallic click. If you suspect that it's out of adjustment, NEVER try to adjust the time delay mechanism. That's a job for your armorer. If you mess with it you might get it loose, which'd cause an erratic low firing rate or failure to fire. Or, you might get it too tight, which'd break the torsion spring.




Another thing, leave the pre-loading of the time delay mechanism to your armorer or his support guys.

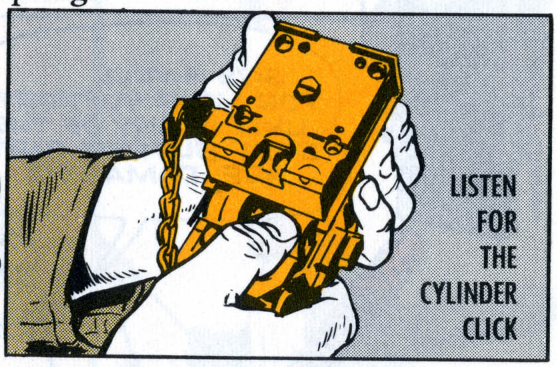
You can double check the solenoid plunger by pulling the trigger extension handle to see that the parts return when you let go of the handle.





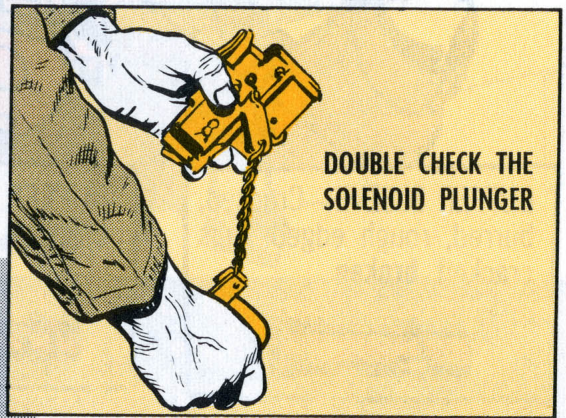

MORE

Put your educated thumb to work to check out the cylinder. When you rotate it, **and then let it go,** you should hear a definite metallic click. If you suspect that it's out of adjustment, NEVER try to adjust the time delay mechanism. That's a job for your armorer. If you mess with it you might get it loose, which'd cause an erratic low firing rate or failure to fire. Or, you might get it too tight, which'd break the torsion spring.




Another thing, leave the pre-loading of the time delay mechanism to your armorer or his support guys.

You can double check the solenoid plunger by pulling the trigger extension handle to see that the parts return when you let go of the handle.



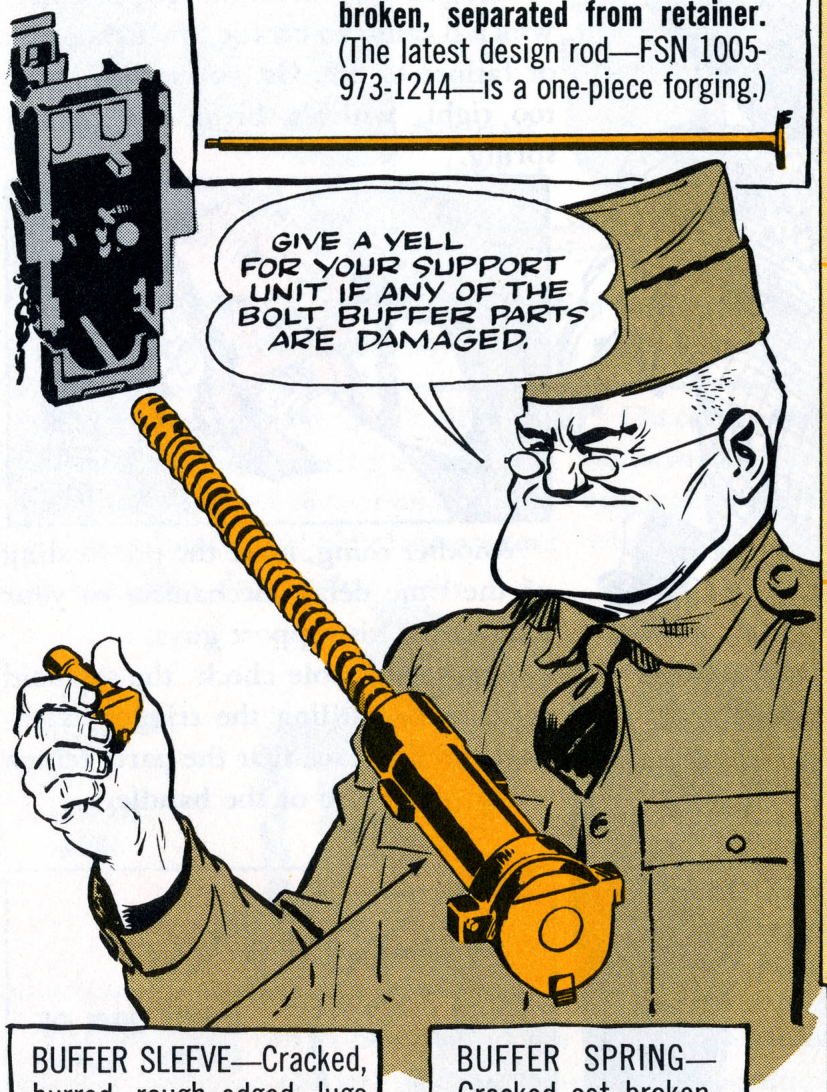



PS MORE

# ACT 3 - Bolt Buffer Group

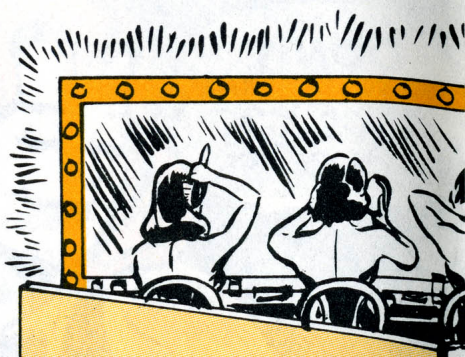
DRIVING SPRING—Bent, kinked, set, **wire strands broken.** (Check all **six** strands, too!)

DRIVING ROD—Crooked, cracked, **broken, separated from retainer.** (The latest design rod—FSN 1005-973-1244—is a one-piece forging.)




BUFFER SLEEVE—Cracked, burred, rough edged; lugs cracked, **broken.**

BUFFER SPRING—Cracked, set, broken.



**Weapons cleared? Bolt in forward position? OK, Start:**

1. **Remove the back plate group.**

2. **Take out the sear by depressing the sear detent with dummy cartridge.**

3. **Remove the bolt buffer group by turning the rod to the left or right and pulling the components from the receiver.**

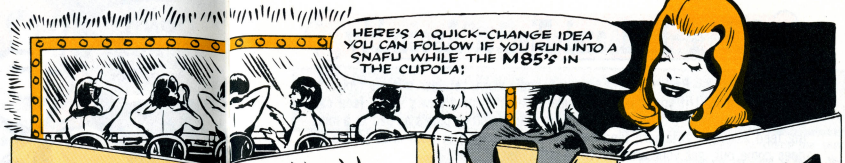
# ACT 3 - Bolt Buffer Group

DRIVING SPRING—Bent, kinked, set, **wire strands broken.** (Check all **six** strands, too!)

DRIVING ROD—Crooked, cracked, **broken, separated from retainer.** (The latest design rod—FSN 1005-973-1244—is a one-piece forging.)

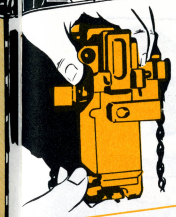
BUFFER SLEEVE—Cracked, burred, rough edged; lugs cracked, **broken.**

BUFFER SPRING—Cracked, set, broken.

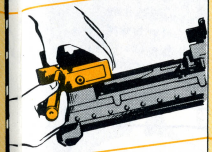



Weapons cleared? Bolt in forward position? OK, Start:

1. Remove the back plate group.

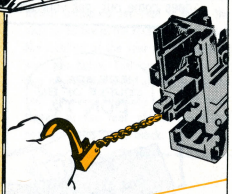


2. Take out the sear by depressing the sear detent with dummy cartridge.

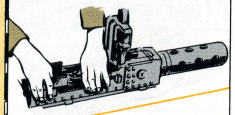


3. Remove the bolt buffer group by turning the rod to the left or right and pulling the components from the receiver.

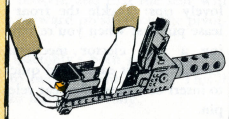
4. Pull the charger handle, thus bringing the bolt to the rear as far as it'll go.



5. Push inward (to the right) on the front of the injector to allow the bolt to ride past it.



6. Now you can take the bolt out. Natch, move the feed cam out of the way, and you'll do all this in reverse to put the new bolt in.

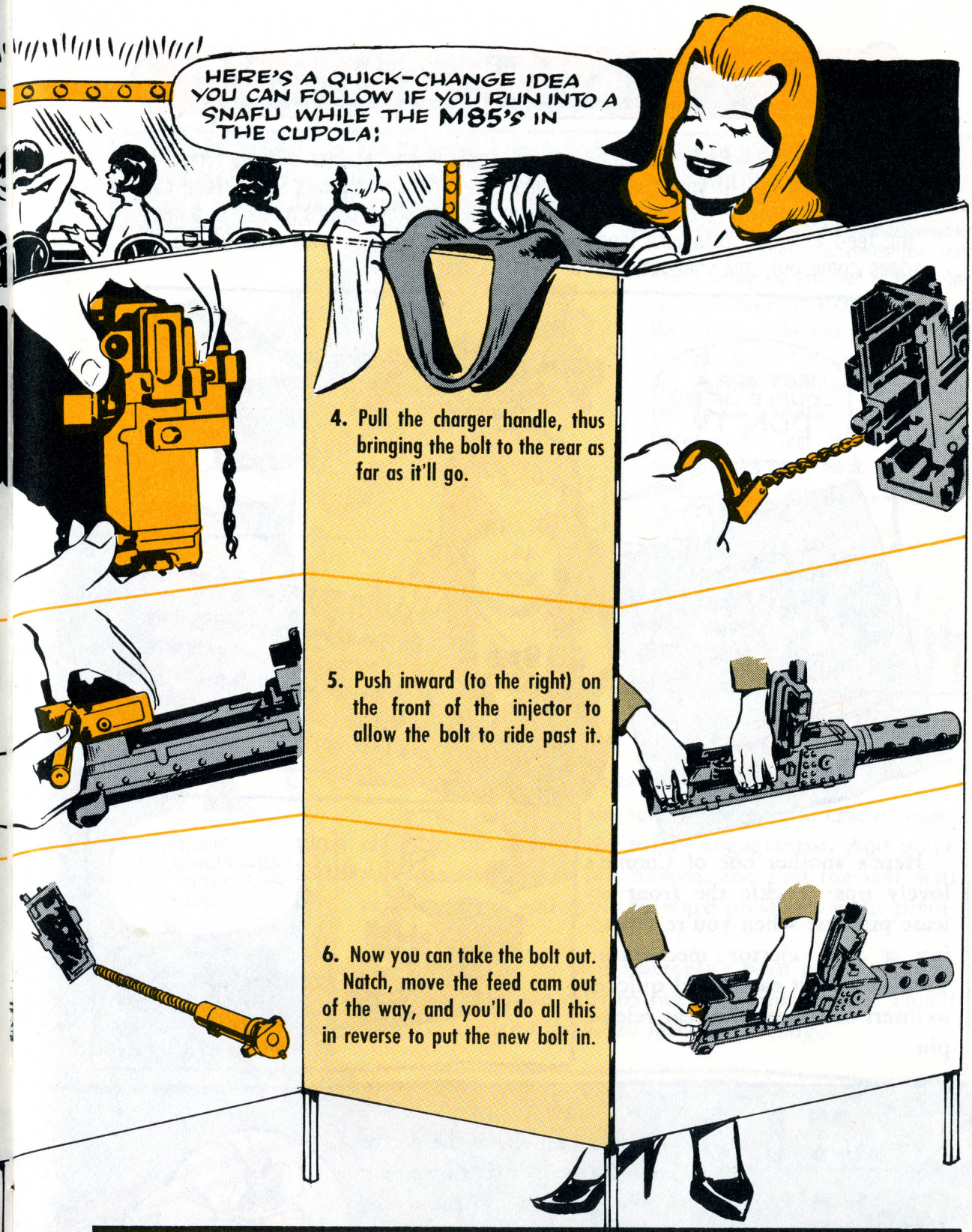


Y'know, it'd pay you a hundred ways to know your bolt assembly inside out. Especially how it works. This could mean your life when the balloon's up and you have to make quick bolt changes if you get a stoppage.





PS MORE




4. Pull the charger handle, thus bringing the bolt to the rear as far as it'll go.

5. Push inward (to the right) on the front of the injector to allow the bolt to ride past it.

6. Now you can take the bolt out. Natch, move the feed cam out of the way, and you'll do all this in reverse to put the new bolt in.

Y'know, it'd pay you a hundred ways to know your bolt assembly inside out. Especially how it works. This could mean your life when the balloon's up and you have to make quick bolt changes if you get a stoppage.

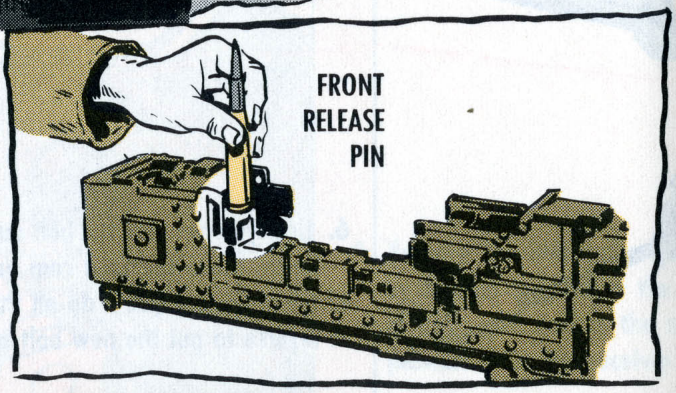


PS MORE

# ACT 4-Feed and Ejector Assembly

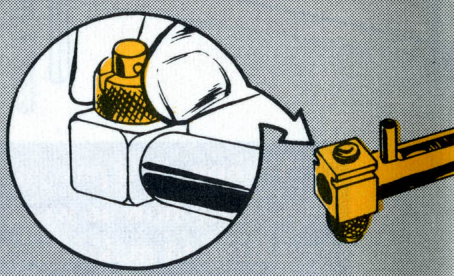
FEED ASSEMBLY—Parts missing, cracked, badly worn; **retainer missing** (you'll be out of action PDQ if you lose the retainer); belt retaining pawls weak; **feed cam cracked;** spring won't return; retainer plug stuck (a stuck plug's as bad as a missing feed assembly retainer); feed cam pin needs staking at both ends (if the pin does come out, get your armorer to re-stake it).

Here's another one of Connie's lovely tips: Tackle the front release pin first when you're replacing a feed ejector mechanism. This'll make it easier and quicker to insert or remove the rear release pin.




# ACT 6 Hand Charger Assembly

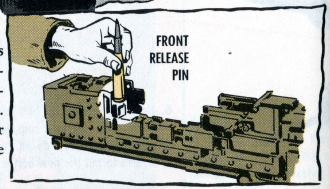
You'd best check the detent knob for proper seating so's it won't get lost. Without the knob you'll have one heckuva time removing and installing the charger assembly.



# ACT 4-Feed and Ejector Assembly

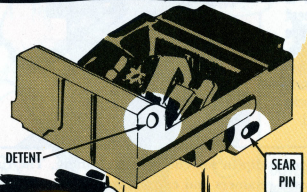
FEED ASSEMBLY—Parts missing, cracked, badly worn; **retainer missing** (you'll be out of action PDQ if you lose the retainer); belt retaining pawls weak; **feed cam cracked;** spring won't return; retainer plug stuck (a stuck plug's as bad as a missing feed assembly retainer); feed cam pin needs staking at both ends (if the pin does come out, get your armorer to re-stake it).

Here's another one of Connie's lovely tips: Tackle the front release pin first when you're replacing a feed ejector mechanism. This'll make it easier and quicker to insert or remove the rear release pin.




# ACT 5-Sear Assembly

SEAR ASSEMBLY—Burred, cracked, rough edged, dirty; **lever pin not flush with left side of sear block.** (But don't ever try to drive the pin in toward the right side 'cause this'll damage the sear detent spring that's located at the other end of the pin.)




**You'll be smart to check the sear detent action to see that it holds the sear assembly in the receiver. Also check the location of the sear pin in the long sear pin holes. You can tell that the two sear buffer units are NG when the sear pin's not touching or is not positioned at the rear of the elongated sear pin holes in the block.**

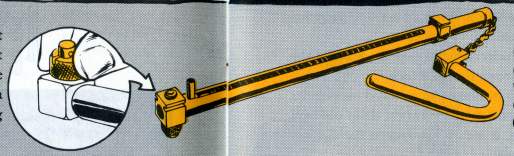
Shy away from dipping the sear assembly in solvent when you're cleaning it. The two sear buffers contain rubber disks that don't take kindly to solvent.

Be sure you check the sear for wear and cracks, especially in the area of the safety engagement. And make sure the sear lever's not broken, and that the sear will raise up when you apply forward pressure on the pivoting sear lever.

Incidentally, the sear assembly's been re-designed by making the guide rails to two different widths. This'll make it harder for you to install it wrong.

# ACT 6 Hand Charger Assembly

You'd best check the detent knob for proper seating so's it won't get lost. Without the knob you'll have one heckuva time removing and installing the charger assembly.

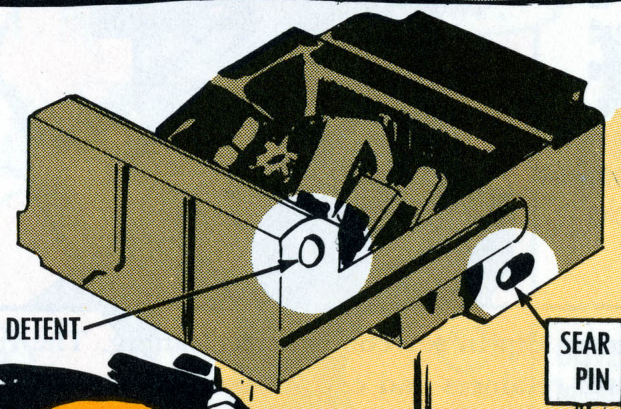


CHARGER ASSEMBLY—Dirty, rusty, burred, cracked, dented, twisted; detent burred, damaged; locking lug worn; charger spring rusty, pitted, worn, broken; charger handle broken, cracked; chain links worn, damaged.

MORE

# ACT 5–Sear Assembly

SEAR ASSEMBLY—Burred, cracked, rough edged, dirty; **lever pin not flush with left side of sear block.** (But don't ever try to drive the pin in toward the right side 'cause this'll damage the sear detent spring that's located at the other end of the pin.)

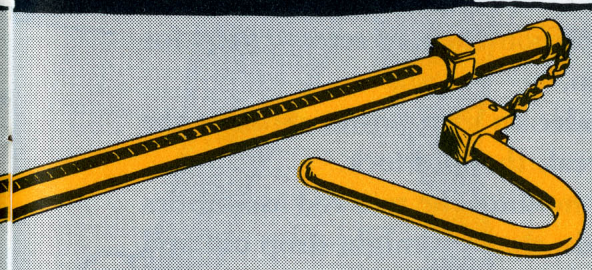



**You'll be smart to check the sear detent action to see that it holds the sear assembly in the receiver. Also check the location of the sear pin in the long sear pin holes. You can tell that the two sear buffer units are NG when the sear pin's not touching or is not positioned at the rear of the elongated sear pin holes in the block.**

Shy away from dipping the sear assembly in solvent when you're cleaning it. The two sear buffers contain rubber disks that don't take kindly to solvent.

Be sure you check the sear for wear and cracks, especially in the area of the safety engagement. And make sure the sear lever's not broken, and that the sear will raise up when you apply forward pressure on the pivoting sear lever.

Incidentally, the sear assembly's been re-designed by making the guide rails to two different widths. This'll make it harder for you to install it wrong.

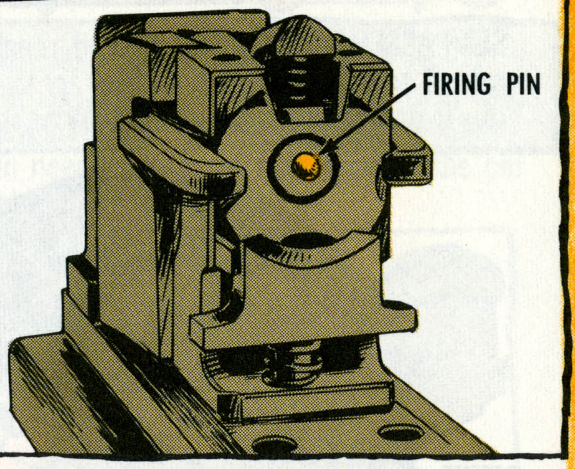


CHARGER ASSEMBLY—Dirty, rusty, burred, cracked, dented, twisted; detent burred, damaged; locking lug worn; charger spring rusty, pitted, worn, broken; charger handle broken, cracked; chain links worn, damaged.

PS MORE

# ACT 7 - Bolt Assembly

BOLT ASSEMBLY—Rammer, case retainer or extractor cracked, worn; spring action too weak to chamber, extract or reject spent cases; **firing pin won't protrude through bolt face** (but be real careful you don't lose the bolt slide pin when you're handling the bolt assembly); bolt block, bolt locks and slide burred, worn, cracked.



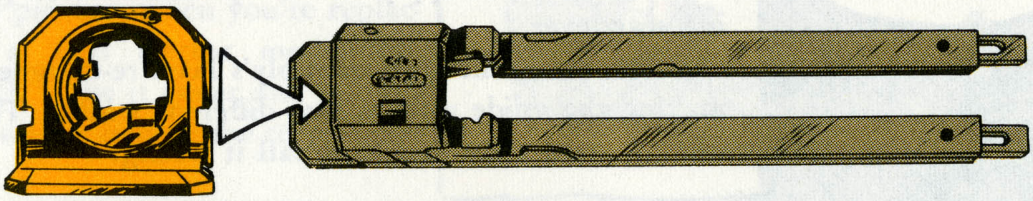

This's another assembly you never dip in solvent during cleaning. The rubber inserts under the rammer, case retainers and extractor can't take it. Your armorer'll take it down once in a while for inspection.

Remember this: if any of your bolt assembly's unfit for action, get your support guys to replace it.

Be sure to doublecheck the firing pin. It could be broken . . . and the gun'd still fire. But sooner or later it'd fall out and then you couldn't count your troubles. If it's busted, or any part of your bolt assembly is unfit, your support buddies will replace it for you.

# ACT 8 - Barrel Extension Assembly

BARREL EXTENSION ASSEMBLY—Bolt lock seating areas worn, **locking surfaces cracked, chipped; barrel extension cracked down the center line; interlock damaged.**



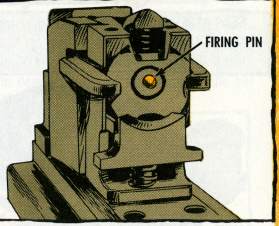
If the interlock won't return to its original position for any reason, yelp for help to your ordnance-type support man pronto.

Incidentally, never let the bolt go forward under its own power without the barrel in place. If you do, you'll damage or break the interlock.

Keep a real sharp eye on those retaining pins holding the two rod assemblies in the barrel extension. If you press in on the rods, the pins might drop out and get lost. But, if the pins drop out by themselves, it means the return springs are NG and need replacing by your support friends.

# ACT 7 - Bolt Assembly

BOLT ASSEMBLY—Rammer, case retainer or extractor cracked, worn; spring action too weak to chamber, extract or reject spent cases; **firing pin won't protrude through bolt face** (but be real careful you don't lose the bolt slide pin when you're handling the bolt assembly); bolt block, bolt locks and slide burred, worn, cracked.



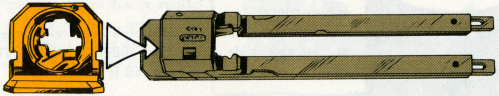

This's another assembly you never dip in solvent during cleaning. The rubber inserts under the rammer, case retainers and extractor can't take it. Your armorer'll take it down once in a while for inspection.

Remember this: if any of your bolt assembly's unfit for action, get your support guys to replace it.

Be sure to doublecheck the firing pin. It could be broken . . . and the gun'd still fire. But sooner or later it'd fall out and then you couldn't count your troubles. If it's busted, or any part of your bolt assembly is unfit, your support buddies will replace it for you.

# ACT 8 - Barrel Extension Assembly

BARREL EXTENSION ASSEMBLY—Bolt lock seating areas worn, **locking surfaces cracked, chipped; barrel extension cracked down the center line; interlock damaged.**

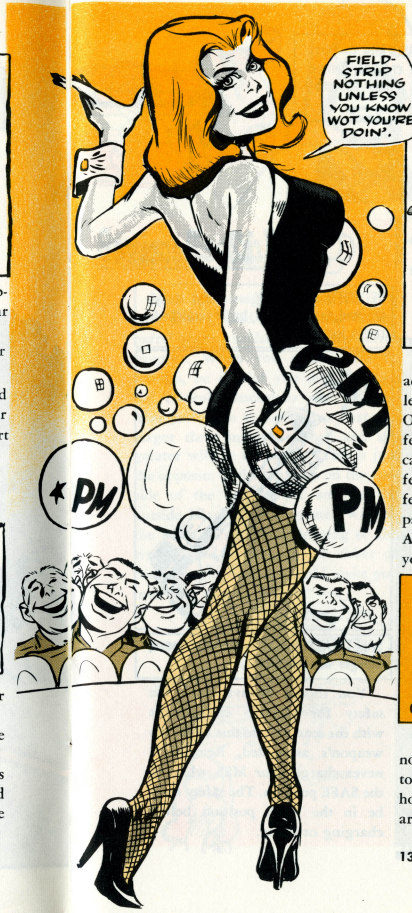


If the interlock won't return to its original position for any reason, yelp for help to your ordnance-type support man pronto.

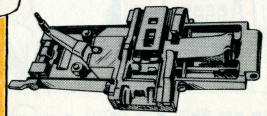
Incidentally, never let the bolt go forward under its own power without the barrel in place. If you do, you'll damage or break the interlock.

Keep a real sharp eye on those retaining pins holding the two rod assemblies in the barrel extension. If you press in on the rods, the pins might drop out and get lost. But, if the pins drop out by themselves, it means the return springs are NG and need replacing by your support friends.






# ACT 9 - Cover Assembly



COVER ASSEMBLY—Cracked, worn, damaged; parts rusty, cracked, rough edged, worn, beat up.

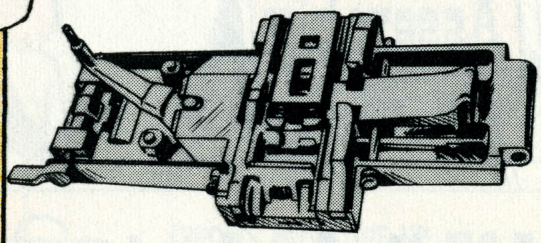
Be sure you try out the cover latch action by turning and releasing the lever. Also see that the spring action's OK when you press down on the belt feed pawl, link stripper and the two cartridge pawls. Doublecheck the belt feed slide movement and move the belt feed lever to see that the cartridge stop pawl goes down like it's supposed to. All parts **must** return quick-like when you release the lever.

Remember to give the detent pawl notches a good once-over. If they're too worn, the cover assembly won't hold in the open position like the parts are supposed to be held.



MORE

# ACT 9
# -Cover Assembly



COVER ASSEMBLY—Cracked, worn, damaged; parts rusty, cracked, rough edged, worn, beat up.

Be sure you try out the cover latch action by turning and releasing the lever. Also see that the spring action's OK when you press down on the belt feed pawl, link stripper and the two cartridge pawls. Doublecheck the belt feed slide movement and move the belt feed lever to see that the cartridge stop pawl goes down like it's supposed to. All parts **must** return quick-like when you release the lever.

CHECK 'EM GOOD

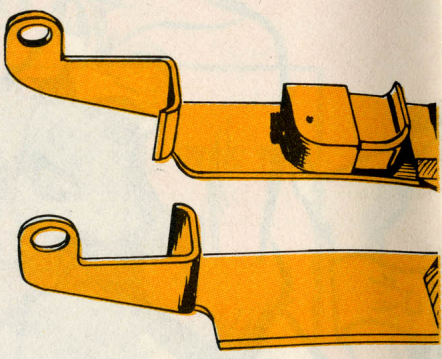
Remember to give the detent pawl notches a good once-over. If they're too worn, the cover assembly won't hold in the open position like the parts are supposed to be held.



P.S. MORE

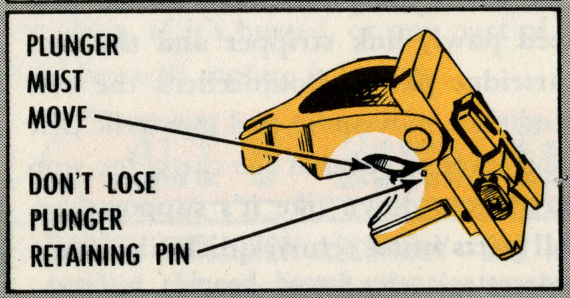
## ACT 10 Feed Tray Assembly

FEED TRAY ASSEMBLY—Dirty, rusty, burred, cracked, dented, twisted; link guide assembly loose.



## ACT 11-Accelerator Assembly

ACCELERATOR ASSEMBLY — Cracked, worn, burred, dirty, rusty; barrel latch assembly and barrel latch lock won't work right; cover detent pawl worn.

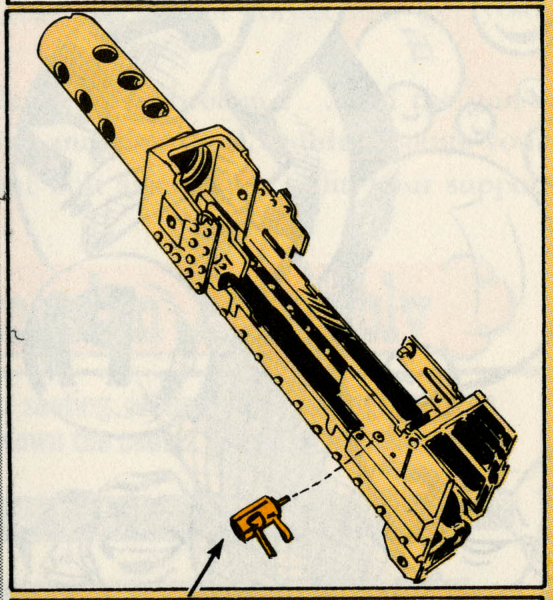



The accelerator plunger MUST move. Check on this by pressing the accelerator rearward with your thumb. Everything should pop back when you let go.

Be mighty careful not to lose the accelerator pin or either of the accelerator plunger retaining pins. Too much tilting and shaking will cause 'em to fall out. Also, you'd be smart not to push in on the accelerator more'n you have to. Your armorer can stake the two little pins in place, so let him know if they're dropping out.

## ACT 12 - Receiver

RECEIVER ASSEMBLY — Dirty, rusty, **cracked,** burred, worn, badly scratched; rivets loose.

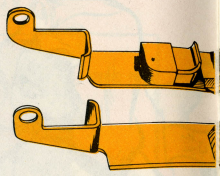


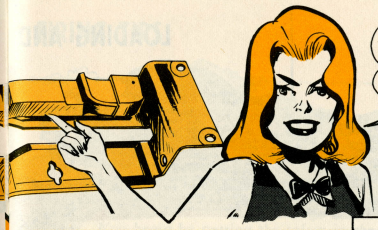
SAFETY ASSEMBLY — **Housing loose; plunger bent, broken.**

You should always check the safety for positive engagement with the sear. But do this while the weapon's assembled. Remember, never charge your M85 while in the SAFE position. The safety must be in the FIRE position before charging or firing.

## ACT 10 Feed Tray Assembly

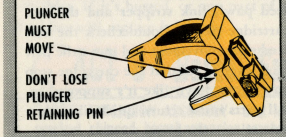
FEED TRAY ASSEMBLY—Dirty, rusty, burred, cracked, dented, twisted; link guide assembly loose.






## ACT 11 - Accelerator Assembly

ACCELERATOR ASSEMBLY — Cracked, worn, burred, dirty, rusty; barrel latch assembly and barrel latch lock won't work right; cover detent pawl worn.

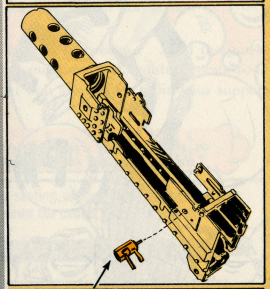



The accelerator plunger MUST move. Check on this by pressing the accelerator rearward with your thumb. Everything should pop back when you let go.

Be mighty careful not to lose the accelerator pin or either of the accelerator plunger retaining pins. Too much tilting and shaking will cause 'em to fall out. Also, you'd be smart not to push in on the accelerator more'n you have to. Your armorer can stake the two little pins in place, so let him know if they're dropping out.

## ACT 12 - Receiver

RECEIVER ASSEMBLY — Dirty, rusty, **cracked,** burred, worn, badly scratched; rivets loose.



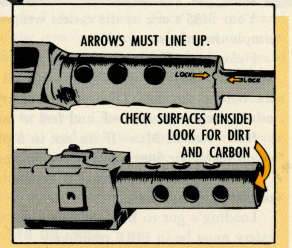
SAFETY ASSEMBLY — **Housing loose; plunger bent, broken.**

You should always check the safety for positive engagement with the sear. But do this while the weapon's assembled. Remember, never charge your M85 while in the SAFE position. The safety must be in the FIRE position before charging or firing.



## Group Assembly

Look for foreign deposits like carbon, grease, mud and the like on the barrel bearing surfaces inside the barrel support. When you clean 'em off, though, be careful you don't change the critical dimensions and finishes. You just have to remember that the larger these inside bearings are, the greater will be the whip. (This is just the opposite of the bearings on the outside of the barrel. The smaller the outside bearings, the greater will be the whip.) Too much cleaning or the wrong kind of cleaning of either of these bearing surfaces could make you miss your target.




When you're putting the barrel together, take it easy and make sure the arrows line up and you hear a definite click. It's a good idea before you fire to give a little extra twist right and left to be doubly sure it's locked tight.

Don't worry too much about loose rivets unless you can see movement between the side plates, bottom plate or barrel support. Also, don't fret if you can squeeze a bit of oil from between the receiver parts.

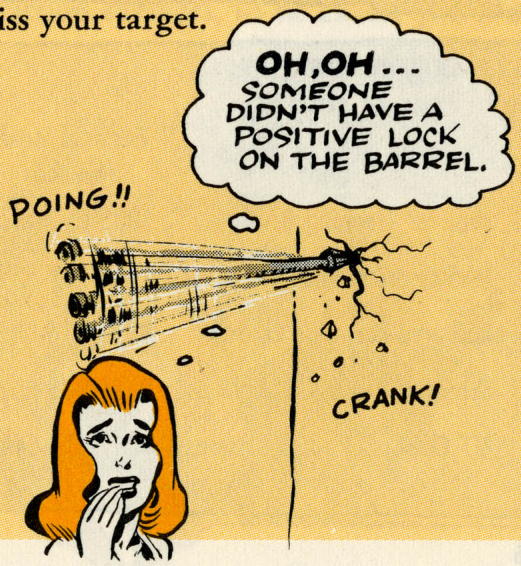
Here's something to watch for real careful-like: See that the barrel latch and lock won't bind for lack of lube. They should move freely. Also make sure you have a positive lock of the barrel in the receiver. Otherwise, Amigo, that barrel could come loose and go flying down the range!

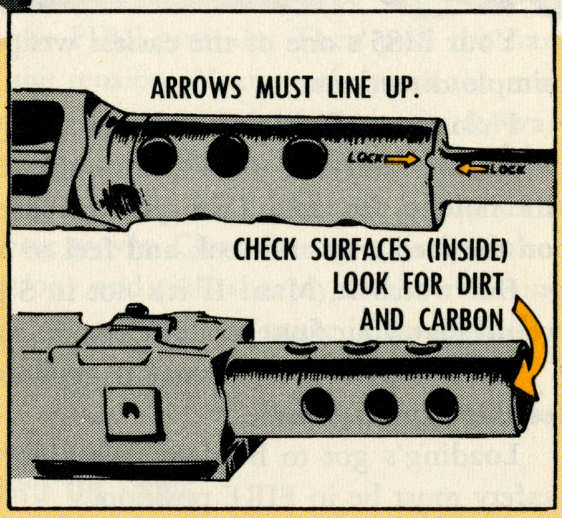


MORE

# Group Assembly

Look for foreign deposits like carbon, grease, mud and the like on the barrel bearing surfaces inside the barrel support. When you clean 'em off, though, be careful you don't change the critical dimensions and finishes. You just have to remember that the larger these inside bearings are, the greater will be the whip. (This is just the opposite of the bearings on the outside of the barrel. The smaller the outside bearings, the greater will be the whip.) Too much cleaning or the wrong kind of cleaning of either of these bearing surfaces could make you miss your target.




When you're putting the barrel together, take it easy and make sure the arrows line up and you hear a definite click. It's a good idea before you fire to give a little extra twist right and left to be doubly sure it's locked tight.

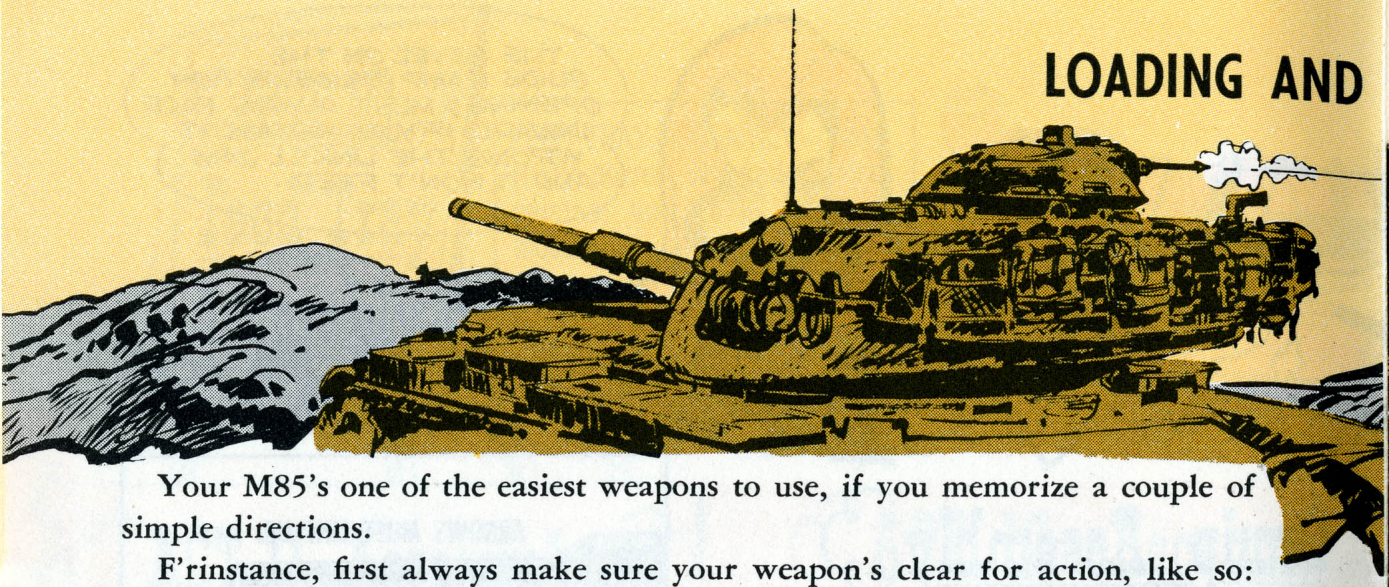
Don't worry too much about loose rivets unless you can see movement between the side plates, bottom plate or barrel support. Also, don't fret if you can squeeze a bit of oil from between the receiver parts.

Here's something to watch for real careful-like: See that the barrel latch and lock won't bind for lack of lube. They should move freely. Also make sure you have a positive lock of the barrel in the receiver. Otherwise, Amigo, that barrel could come loose and go flying down the range!



P.S. MORE

# LOADING AND



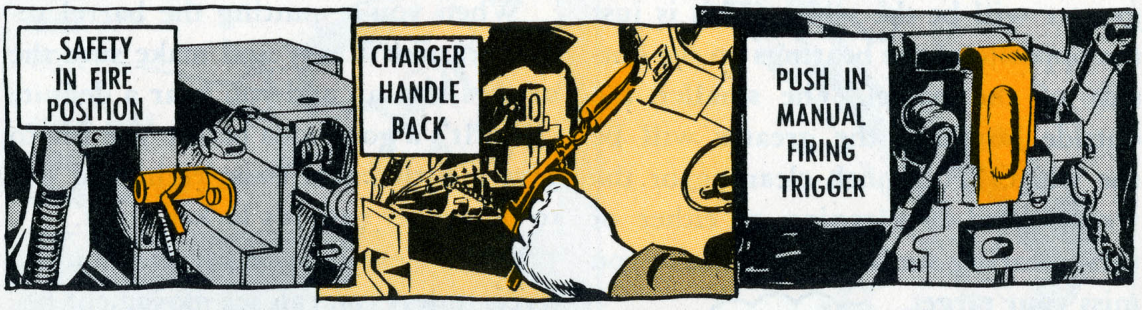
Your M85's one of the easiest weapons to use, if you memorize a couple of simple directions.

F'rinstance, first always make sure your weapon's clear for action, like so: With the safety in the F position, pull the hand charger handle back to lock the bolt to the rear. Then put the safety in the S position. Next, raise the cover on the feed tray and look and feel to make sure no ammo's in there.

But watch it, Man: If it's not in S position and the bolt comes forward, it could snap your fingers off! When no ammo's found, put the safety in F position.

Then depress the manual trigger and e-a-s-e the bolt forward under control of the charger handle.

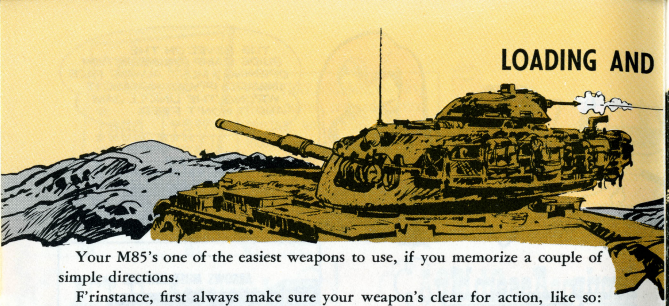
Loading's got to be done just right . . . the bolt must be forward and the safety must be in FIRE position.




BASIC ISSUE ITEM—**Missing, broken, wrong ones.**
Check what you have against this list:

| Item | Federal Stock Number | Qty | Item | Federal Stock Number | Qty |
|---|---|---|---|---|---|
| Barrel with Flash Suppressor | 1005-712-1326 | 1 | Receiver Cleaning Brush | 1005-650-4508 | 1 |
| Bolt Assembly | 1005-857-0023 | 1 | M15 Cleaning Rod Case | 1005-981-1257 | 1 |
| Box, Spare Parts | 1005-770-4590 | 1 | Ruptured Cartridge Extractor | 4933-716-0041 | 1 |
| Chamber Cleaning Brush | 1005-766-0915 | 1 | Semi-Fluid Lube Oil | 9150-889-3522 | 1 |
| Bore Cleaning Brush | 1005-550-4037 | 4 | M7 Cleaning Rod (5 Sections) | 1005-653-5441 | 1 |

# LOADING AND FIRING TIPS



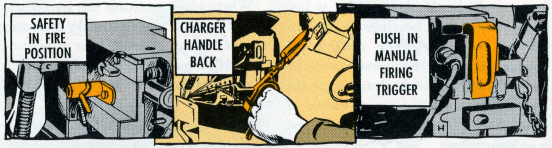
Your M85's one of the easiest weapons to use, if you memorize a couple of simple directions.

F'rinstance, first always make sure your weapon's clear for action, like so: With the safety in the F position, pull the hand charger handle back to lock the bolt to the rear. Then put the safety in the S position. Next, raise the cover on the feed tray and look and feel to make sure no ammo's in there.

But watch it, Man: If it's not in S position and the bolt comes forward, it could snap your fingers off! When no ammo's found, put the safety in F position.

Then depress the manual trigger and e-a-s-e the bolt forward under control of the charger handle.

Loading's got to be done just right . . . the bolt must be forward and the safety must be in FIRE position.




BASIC ISSUE ITEM—**Missing, broken, wrong ones.**
Check what you have against this list:

| Item | Federal Stock Number | Qty | Item | Federal Stock Number | Qty |
|---|---|---|---|---|---|
| Barrel with Flash Suppressor | 1005-712-1326 | 1 | Receiver Cleaning Brush | 1005-650-4508 | 1 |
| Bolt Assembly | 1005-857-0023 | 1 | M15 Cleaning Rod Case | 1005-981-1257 | 1 |
| Box, Spare Parts | 1005-770-4590 | 1 | Ruptured Cartridge Extractor | 4933-716-0041 | 1 |
| Chamber Cleaning Brush | 1005-766-0915 | 1 | Semi-Fluid Lube Oil | 9150-889-3522 | 1 |
| Bore Cleaning Brush | 1005-550-4037 | 4 | M7 Cleaning Rod (5 Sections) | 1005-653-5441 | 1 |



You begin by putting the safety in the FIRE position. Then pull the hand charger handle back enough to relieve the tension. Next, push in on the manual firing trigger and let the bolt go forward s-l-o-w-l-y till it's in the forward position. Like was said, the bolt must be forward. Remember that!

Now place the belt with the open sides of the M15A2 links facing down (single round) over the double belt holding pawls. Close the cover (**remember, make sure** the safety's in the **FIRE** position) and pull sharply to the rear once on the charger. Now you're ready to go! But watch it, 'cause if the bolt's **not** engaged by the sear, it will go all by itself.

If you're not going to fire right away, though, be sure you slip the safety back in the SAFETY position till you get the signal to fire.

## A WORD OR TWO ON FIRING

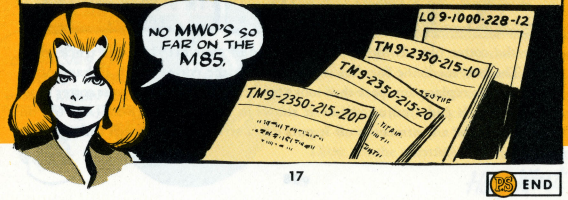
When you're firing the M85, remember that the cooling periods between bursts should be as frequent and as long as possible—except in tactical emergencies, of course.

And get this straight: Never make a rate selector change during actual firing. That'd be as bad as shifting into reverse while gunning your jalopy down the highway.

However, if you put a little of that special lube in the right places (on those friction surfaces, to be exact) you'll really be operating.

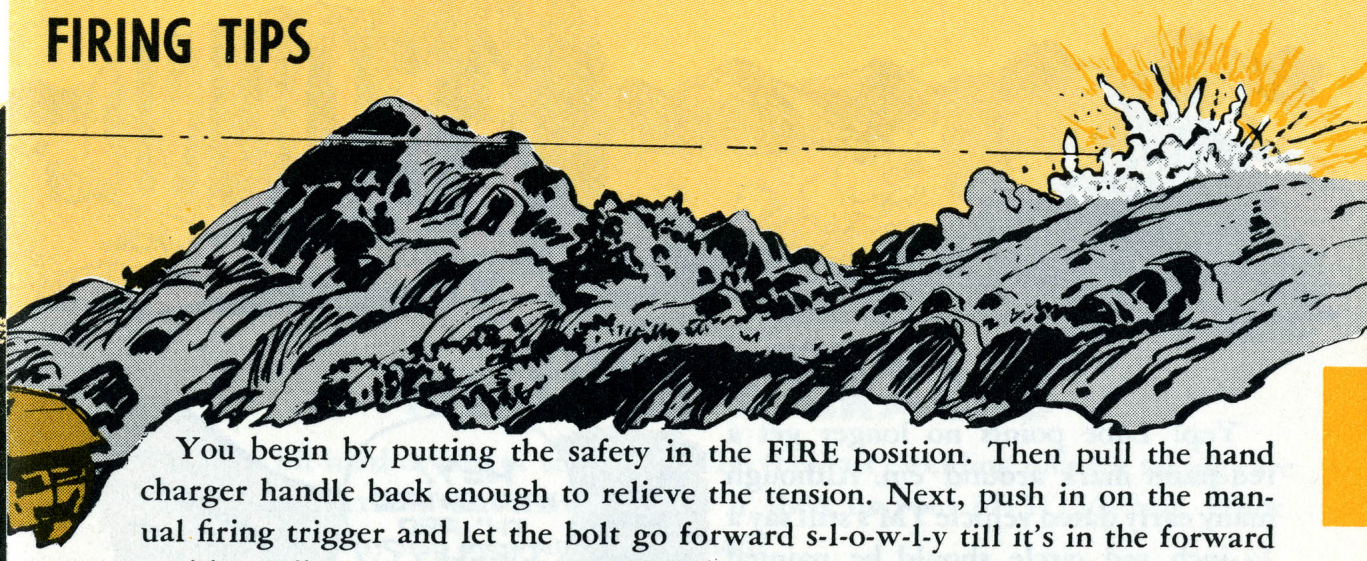
**PUBLICATIONS—Missing, ripped, unreadable, wrong ones.**

You'll find all of your M85 dope in TM's 9-2350-215-10 (Sep 62) and 9-2350-215-20 (Oct 62), 9-2350-215-20 P (Nov 62) and LO 9-1000-228-12 (Apr 64).




END

# FIRING TIPS



You begin by putting the safety in the FIRE position. Then pull the hand charger handle back enough to relieve the tension. Next, push in on the manual firing trigger and let the bolt go forward s-l-o-w-l-y till it's in the forward position. Like was said, the bolt must be forward. Remember that!

Now place the belt with the open sides of the M15A2 links facing down (single round) over the double belt holding pawls. Close the cover (**remember, make sure** the safety's in the **FIRE** position) and pull sharply to the rear once on the charger. Now you're ready to go! But watch it, 'cause if the bolt's **not** engaged by the sear, it will go all by itself.

If you're not going to fire right away, though, be sure you slip the safety back in the SAFETY position till you get the signal to fire.

## A WORD OR TWO ON FIRING

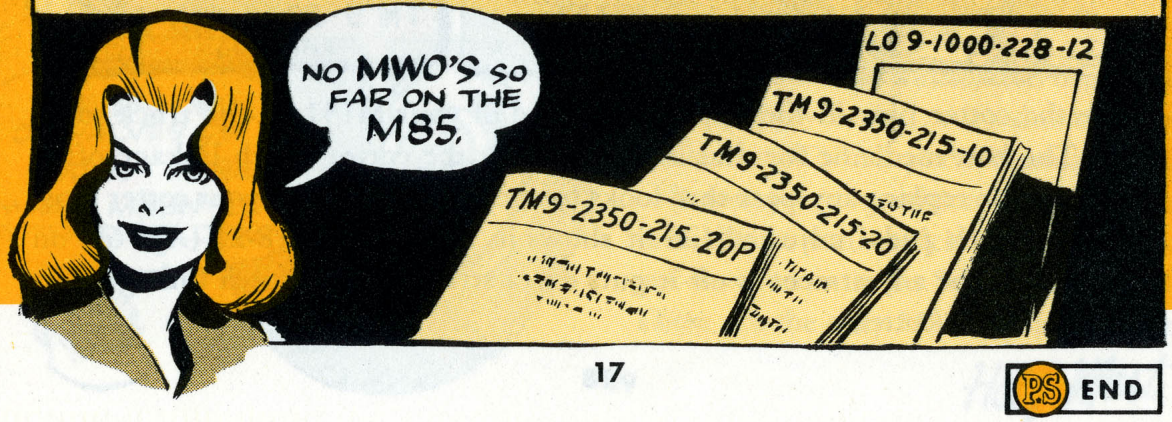
When you're firing the M85, remember that the cooling periods between bursts should be as frequent and as long as possible—except in tactical emergencies, of course.

And get this straight: Never make a rate selector change during actual firing. That'd be as bad as shifting into reverse while gunning your jalopy down the highway.

However, if you put a little of that special lube in the right places (on those friction surfaces, to be exact) you'll really be operating.

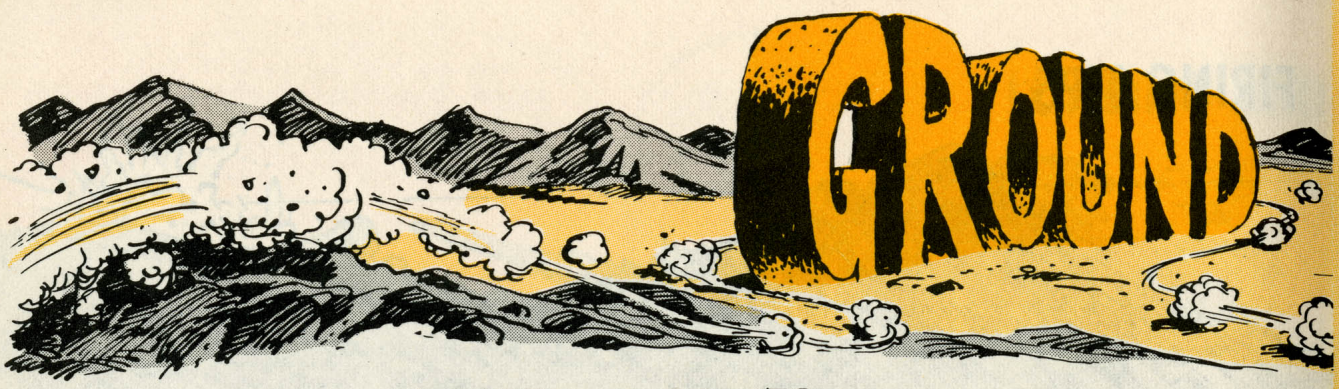
**PUBLICATIONS—Missing, ripped, unreadable, wrong ones.**

**You'll find all of your M85 dope in TM's 9-2350-215-10 (Sep 62) and 9-2350-215-20 (Oct 62), 9-2350-215-20 P (Nov 62) and LO 9-1000-228-12 (Apr 64).**






P.S. END




# NAKED POINTS

Yep! Lube points no longer get a red paint mark around 'em. Although many early dated vehicle TM's still say a ¾-inch red circle should be painted around all lubrication points, you no longer do it.

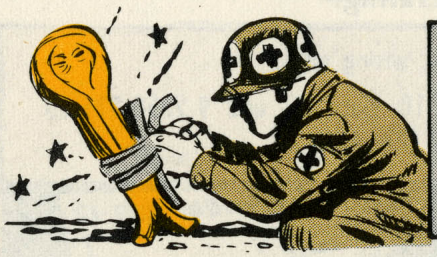
TB 9-265 (Dec 58) kills the requirement for red paint marking around lubrication points.

Save the paint and keep the points naked . . . but clean.

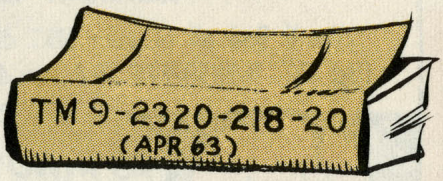
Why did they discontinue the red markings? ? ?

You follow the lube order when doing a grease job; lubing by sight or memory is strictly no go.

Find your lube points via your LO and stop looking for red circles 'cause they're not there.



## M151 ¼-TON TIP




Are the cotter pins in the upper clutch rod of your M151 ¼-ton truck snapping? The best medicine for that is to check out the entire clutch linkage often and repair or replace any part that looks too beat up. To coddle your cotter pins, keep the clutch pedal adjusted like it shows in TM 9-2320-218-20 (Apr 63) on page 106. If the adjustment is off it puts extra strain on the clutch linkage; this could pop your cotters.

## NAKED POINTS

Yep! Lube points no longer get a red paint mark around 'em. Although many early dated vehicle TM's still say a ¾-inch red circle should be painted around all lubrication points, you no longer do it.

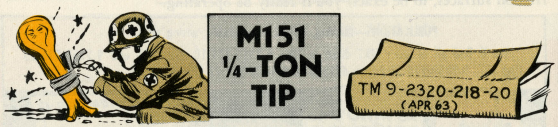
TB 9-265 (Dec 58) kills the requirement for red paint marking around lubrication points.

Save the paint and keep the points naked... but clean.

Why did they discontinue the red markings? ? ?

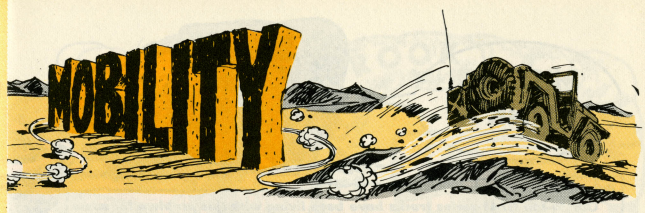
You follow the lube order when doing a grease job; lubing by sight or memory is strictly no go.

Find your lube points via your LO and stop looking for red circles 'cause they're not there.




Are the cotter pins in the upper clutch rod of your M151 ¼-ton truck snapping? The best medicine for that is to check out the entire clutch linkage often and repair or replace any part that looks too beat up. To coddle your cotter pins, keep the clutch pedal adjusted like it shows in TM 9-2320-218-20 (Apr 63) on page 106. If the adjustment is off it puts extra strain on the clutch linkage; this could pop your cotters.






## M151 BODY CRACKS

It's a bit hard to find or come by a TIG (heli-arc) welding unit for taking care of the small cracks that show up here 'n' there on your M151, ¼- ton, truck.

So-o-o-o, why not try a simpler method?

You've been given the go-ahead to use the oxyacetylene for the job, when you find that arc-welding 'em isn't too good for a long lasting effect. But, you've gotta be careful with that flame heating so's not to warp the metal.

To keep the area "cool", just take powdered asbestos (or some other suitable material) wet it down, form a dam aroun' the area and braze away. Keep the flame as low as possible.

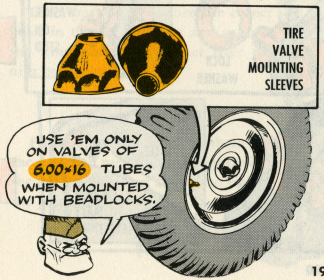
## LITTLE DOO-DADS

***Dear Half-Mast,***

***I've got to locate some of those little doo-dads that fit over our M38A1 ¼-ton truck's valve stem. Y'know, they're shaped like little umbrellas and go over the tire tube stem before you put the valve cap on.***

***I can't find any info on them such as FSN and nomenclature; can you help me?***

**Sgt R. A. D.**



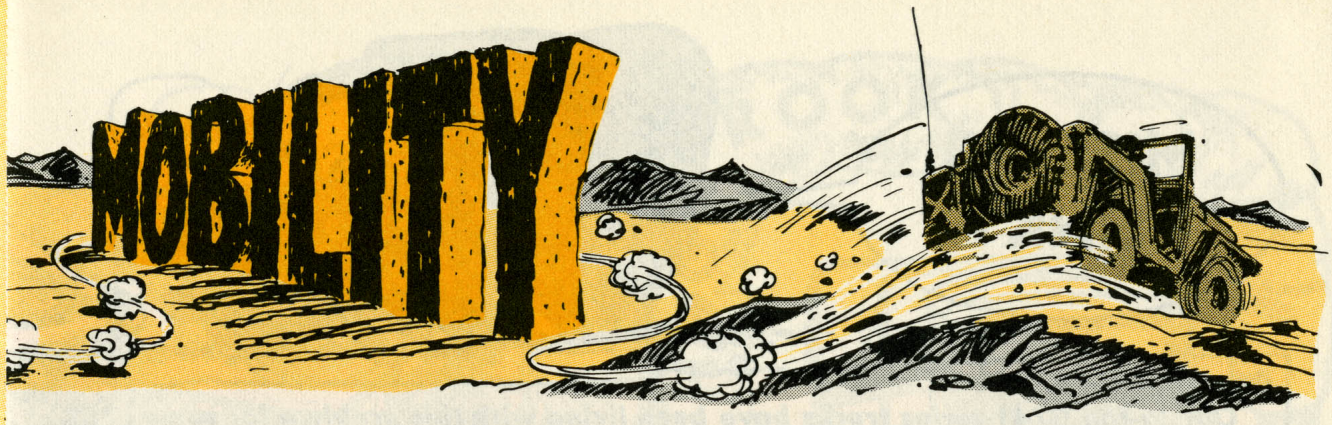

Dear Sergeant R. A. D.,

The doo-dad you're looking for is Sleeve, Tire Valve Mounting, FSN 2640-219-8388.

The sleeve is an authorized organizational supply item . . . it's due to show up in the M38A1 parts manual soon.

Before you requisition the sleeves be sure the ¼-ton vehicle you intend to put them on is under Serial No. 83569. These are the only M38A1's that get it.

*Half-Mast*




# M151 BODY CRACKS

It's a bit hard to find or come by a TIG (heli-arc) welding unit for taking care of the small cracks that show up here 'n' there on your M151, ¼- ton, truck.

So-o-o-o, why not try a simpler method?

You've been given the go-ahead to use the oxyacetylene for the job, when you find that arc-welding 'em isn't too good for a long lasting effect. But, you've gotta be careful with that flame heating so's not to warp the metal.

To keep the area "cool", just take powdered asbestos (or some other suitable material) wet it down, form a dam aroun' the area and braze away. Keep the flame as low as possible.

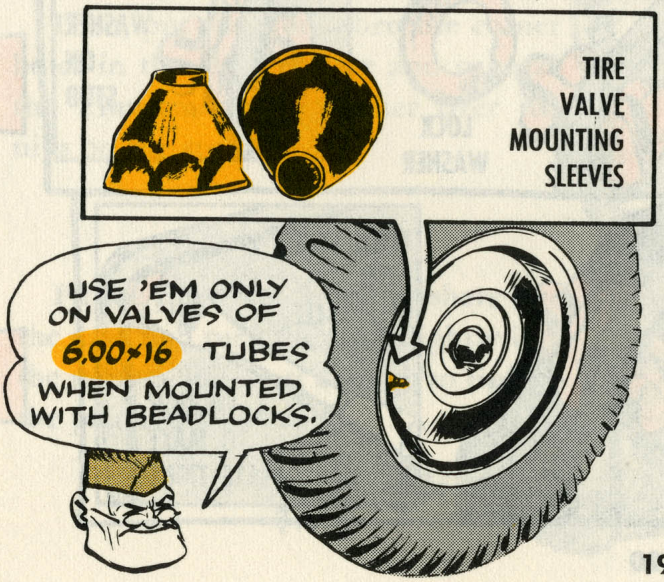
# LITTLE DOO-DADS

***Dear Half-Mast,***

***I've got to locate some of those little doo-dads that fit over our M38A1 ¼-ton truck's valve stem. Y'know, they're shaped like little umbrellas and go over the tire tube stem before you put the valve cap on.***

***I can't find any info on them such as FSN and nomenclature; can you help me?***

***Sgt R. A. D.***




Dear Sergeant R. A. D.,

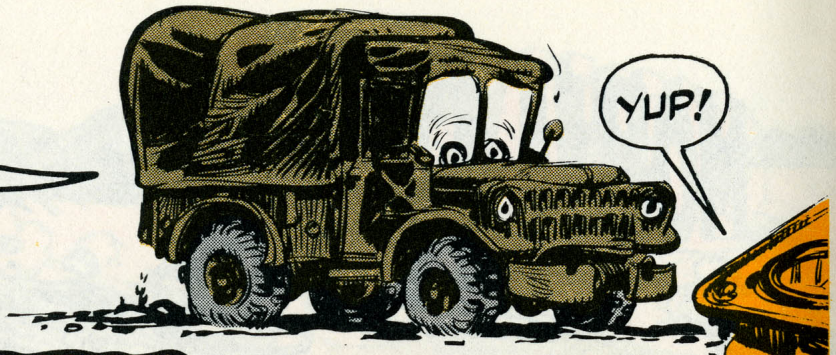
The doo-dad you're looking for is Sleeve, Tire Valve Mounting, FSN 2640-219-8388.

The sleeve is an authorized organizational supply item . . . it's due to show up in the M38A1 parts manual soon.

Before you requisition the sleeves be sure the ¼-ton vehicle you intend to put them on is under Serial No. 83569. These are the only M38A1's that get it.

*Half-Mast*

# MISSING LINK?




***Dear Half-Mast,***

***Our ¾-ton G741-series trucks have been living with this problem for some time.***

***It's the Tinnerman-type lock washer (FSN 5310-752-6591) that's listed on page 34 of TM 9-2320-212-20P that's giving us trouble.***

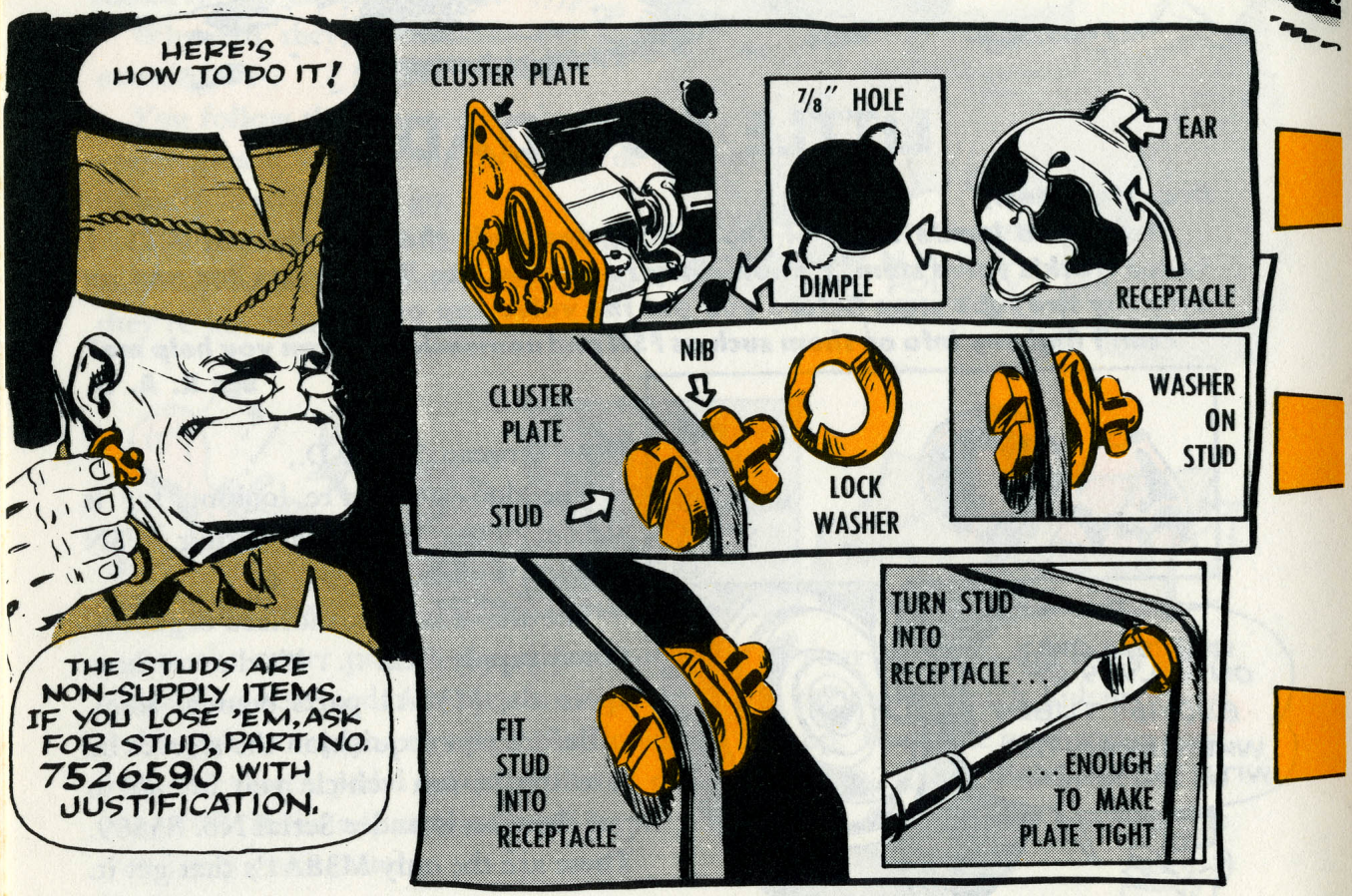
***This washer seems to be too small to hold the cluster plate panel in place. How do we make it work?***

**WO K. H. C.**

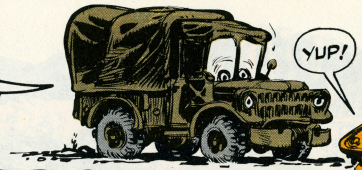
Dear Mr. K. H. C.,

You need another part.

The missing link is the four receptacles listed on page 35 in your -20P under FSN 2510-753-9255 (now changed to FSN 5325-753-9255). Without 'em, your lock washer will slip right thru those dashboard holes.



# MISSING LINK?




***Dear Half-Mast,***

***Our ¾-ton G741-series trucks have been living with this problem for some time.***

***It's the Tinnerman-type lock washer (FSN 5310-752-6591) that's listed on page 34 of TM 9-2320-212-20P that's giving us trouble.***

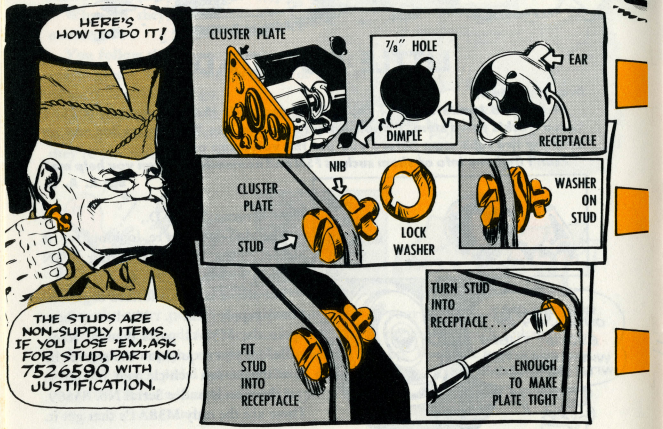
***This washer seems to be too small to hold the cluster plate panel in place. How do we make it work?***

**WO K. H. C.**

Dear Mr. K. H. C.,

You need another part.

The missing link is the four receptacles listed on page 35 in your -20P under FSN 2510-753-9255 (now changed to FSN 5325-753-9255). Without 'em, your lock washer will slip right thru those dashboard holes.



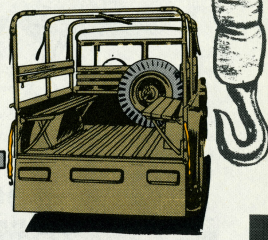
From inside the dash you slip the two ears on the receptacle thru the four ⅞-in holes cut into the dash to take the cluster plate. The ears go into the small recess (dimple) on the outside of the holes, and retain the receptacle.

Then, put the studs thru the corner holes in the cluster plate and squeeze the Tinnerman-type washer over the nibs on the stud.

Fit the plate, studs and washers into the dash and turn the stud slightly into the receptacles—just enough to tighten the plate good 'n' snug.

*Half-Mast*

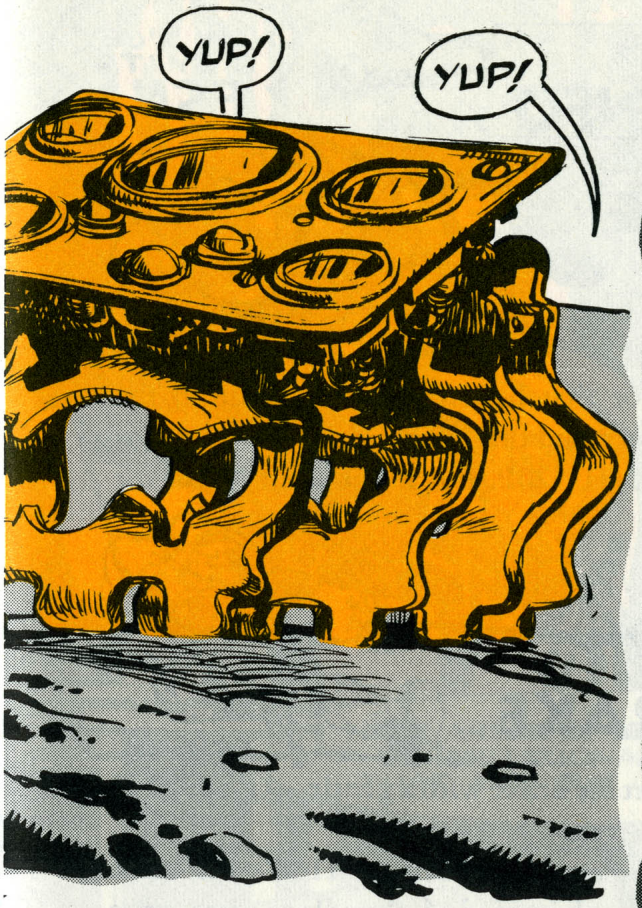
## HOOK ROOK



Careful about getting hooked when you want a tail-gate hook for your ¾-ton truck.

If you order Hook, FSN 4030-274-3472 that's on page 72 of TM 9-2320-212-20P (Feb 60); you'll get a log-chain hook.

What you need is in Change 1 (Nov 62) to TM 9-2320-212-20P — it has the last item listed. It's Chain, Retaining, Tailgate Assy, FSN 2540-700-5440, and it has the right hook.



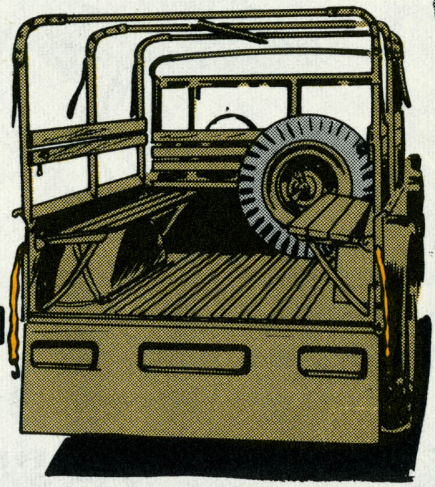

From inside the dash you slip the two ears on the receptacle thru the four 7/8-in holes cut into the dash to take the cluster plate. The ears go into the small recess (dimple) on the outside of the holes, and retain the receptacle.

Then, put the studs thru the corner holes in the cluster plate and squeeze the Tinnerman-type washer over the nibs on the stud.

Fit the plate, studs and washers into the dash and turn the stud slightly into the receptacles—just enough to tighten the plate good 'n' snug.

*Half-Mast*

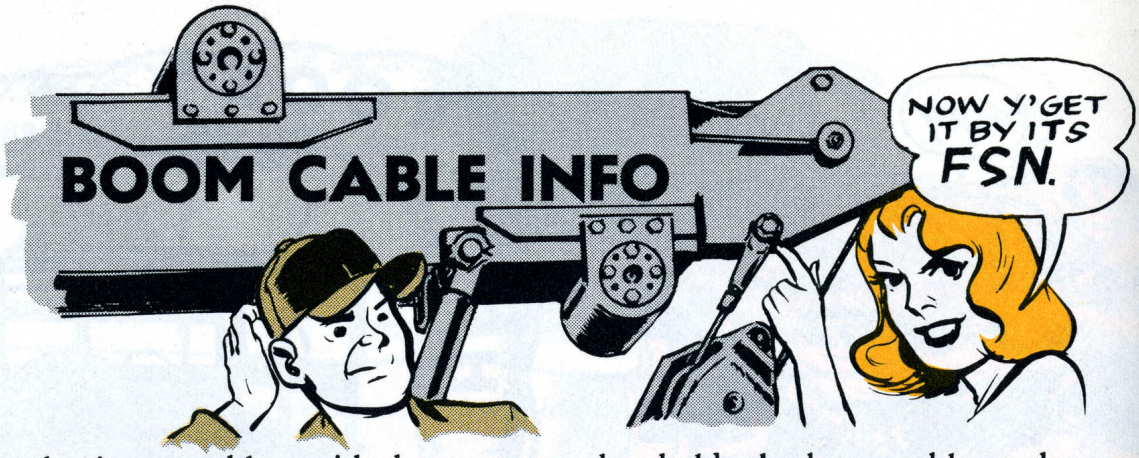
## HOOK ROOK



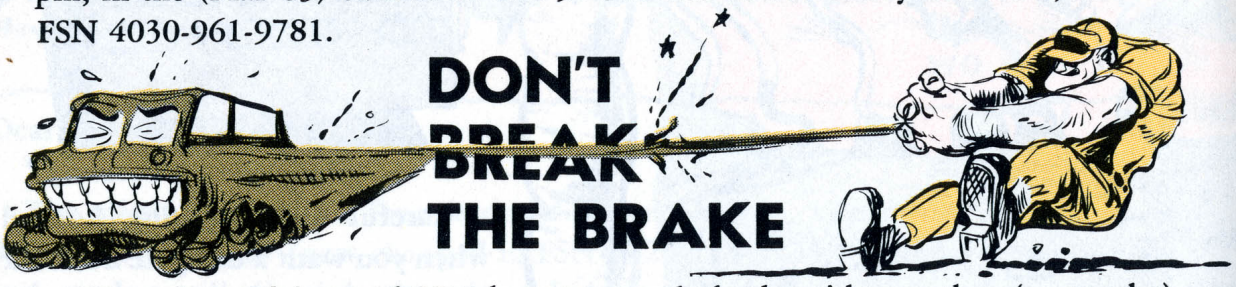
Careful about getting hooked when you want a tail-gate hook for your ¾-ton truck.

If you order Hook, FSN 4030-274-3472 that's on page 72 of TM 9-2320-212-20P (Feb 60); you'll get a log-chain hook.

What you need is in Change 1 (Nov 62) to TM 9-2320-212-20P — it has the last item listed. It's Chain, Retaining, Tailgate Assy, FSN 2540-700-5440, and it has the right hook.




You having a problem with the connector that holds the boom cable to the sheave in the M543 5-ton wrecker? You won't find this connector or cable anchor pin, in the (Mar 63) edition of TM 9-2320-211-20P. But if you need it, ask for FSN 4030-961-9781.

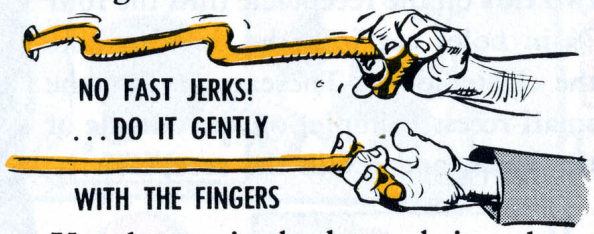



Most of you drivers of M116 cargo carriers are fine physical specimens. In fact, you're so husky you don't know your own strength—and that's why so many M116 parking-brake cables get broken.

The parking-brake cable is plenty strong enough to do its job. But as muscle-building equipment it's strictly a bust.

What you have to do is curl your fingers around it as shown in Fig. 29A of TM 9-2320-223-10 (Jul 62) and set the brake with a gentle—(g-e-n-t-l-e)—finger pressure.

Future production M116's will have a knob instead of a handle to discourage the rough stuff. But for now, remember




Use the service brake to bring the vehicle to a complete stop. Then set your parking brake.

# NEED A FLASHER?

M88 VTR's (serial numbers 8 through 218) can get an improved flasher. When the original flasher (part number 7526900) goes on the blink you're to ask for thermal flasher, FSN 5945-066-3984, through normal supply channels. See SB 9-224 (4 Mar 64).

If your M88 came out without any flasher whatsoever, (serial numbers 219 through 1000), you can get the improved flasher for free if you mention the SB and the vehicle's serial number on your request.

# Witchcraft EXPOSED

Everybody . . . but **everybody** who's authorized a 24-volt Low Voltage Circuit Tester should know how to use it.

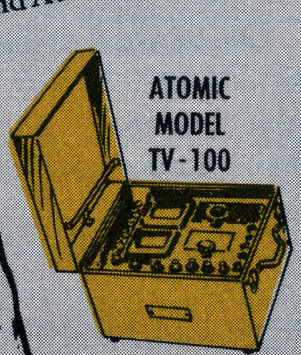
This includes all organizational maintenance units that're authorized a No. 1 Supplemental Tool Kit or the No. 2 Common Tool Kit. The tester is in these automotive tool kits under FSN 4910-092-9136.

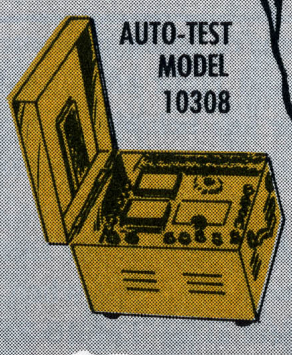
The old gray snake-box is not really full of hocus-pocus witchcraft. You, too, can master the tester and trouble shoot any vehicle's electrical system like an old pro. Just get yourself the basic TM that reveals all the not-so-secret tricks.

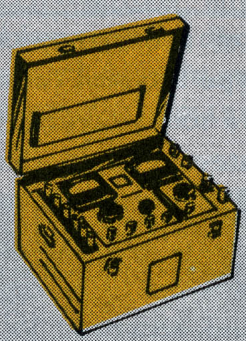
HERE ARE TWO SETS OF OPERATOR'S AND ORGANIZATIONAL MAINTENANCE MANUALS THAT ARE OUT ON THE TESTER.

TM 9-4910-401-12 (Nov 62) and TM 9-4910-401-20P (Feb 62). This set is for the Auto Test Inc Model 10308 and Atomic Engineering Model TV-100.

TM 9-4910-402-12 (Jul 62) w/ Change No. 1 (Oct 62) and TM 9-4910-402-20P (Feb 62). These TM's cover the Electro Mechanisms Corp Model 1060.



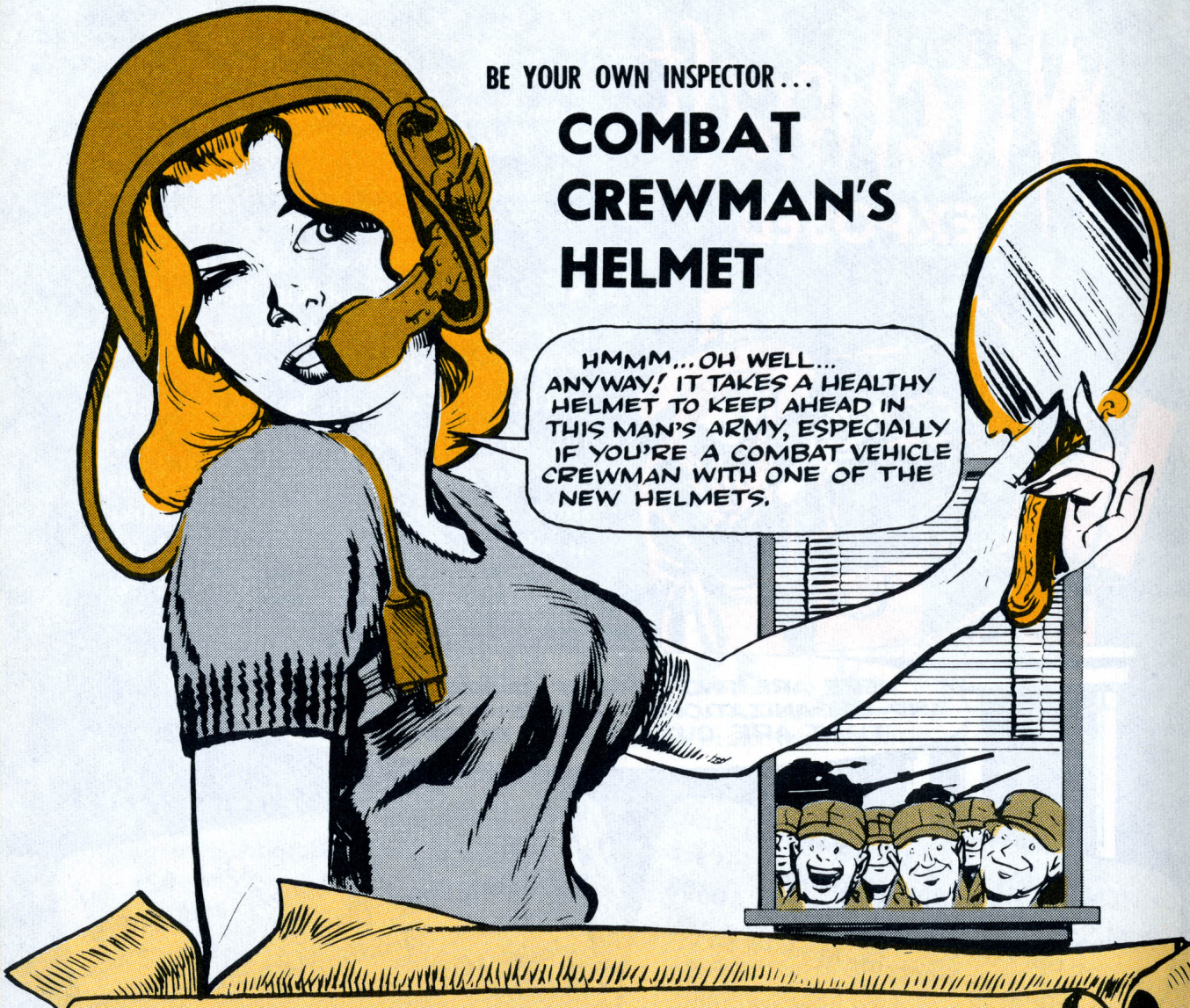




Although the initial publications distribution didn't include all organizational maintenance outfits that need the TM's, you can get 'em for your particular test set. Just requisition the TM's the usual way, but include a brief statement that the TM is a "needed" pub as outlined in AR 310-1 (Mar 62), Para 63(1).

Without these pubs the witchcraft of the gray boxes may never be exposed . . . get the TM's and be a wizard.

BE YOUR OWN INSPECTOR...

# COMBAT CREWMAN'S HELMET



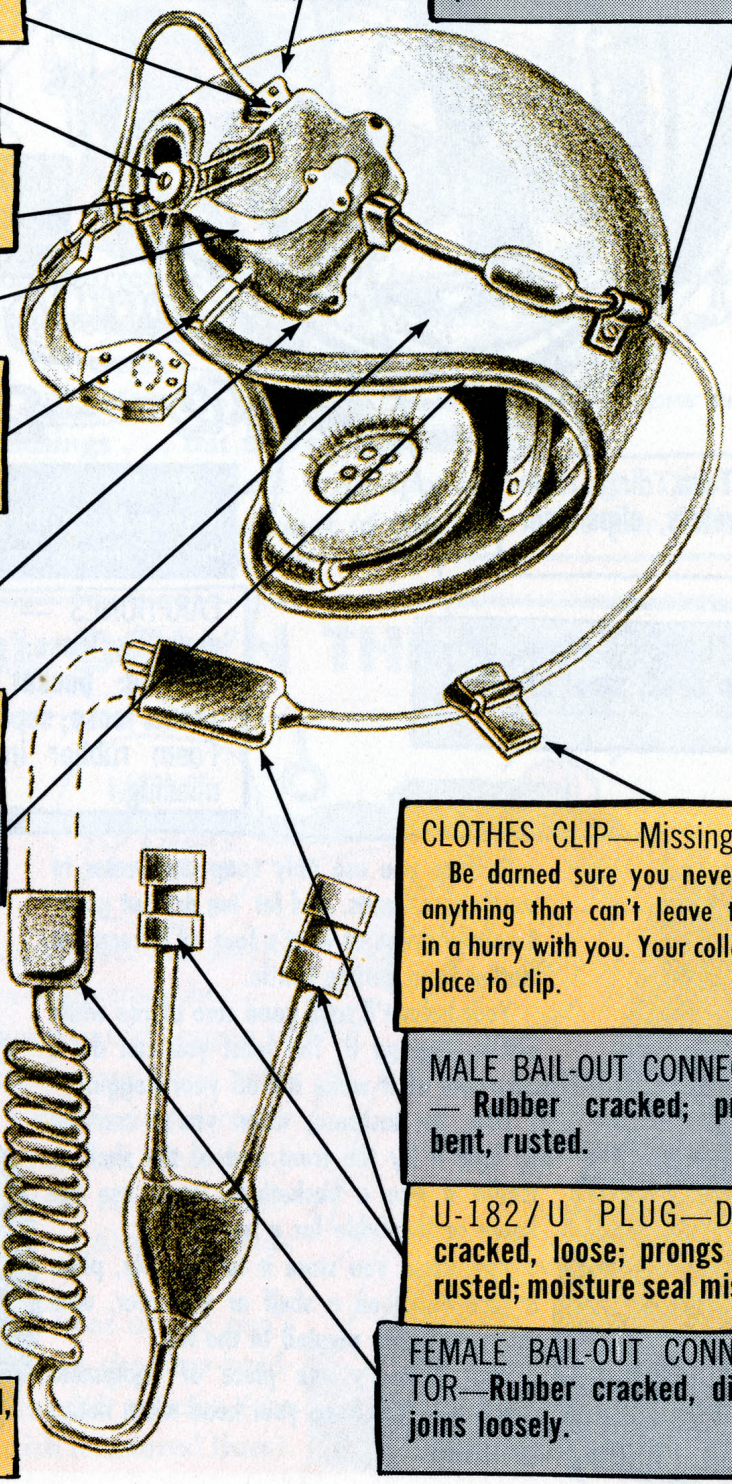

Follow this inspection guide and you're halfway home. Defects that are in **bold type** are real serious. Get 'em fixed right off, or take care of 'em yourself. If a tool's needed, you'll know the job belongs to higher echelon.

Whatever you do, though, don't fuss around with the communications equipment. That's strictly a job for experts.

FIT—Too loose or too tight; rides high or low on forehead; earphones and earpads loose, uncomfortable; mike away from lips when boom's down; sweatband and neckband loose. (Chap 2, Sect II of TM 10-8415-201-15 dated Jan 61, tells how to get the right fit.)

Make sure you get the right size helmet to begin with. If your hat size is 6⅞ or smaller, you'll probably take the regular. If it's above 6⅞, try the large.

The regular size (FSN 8415-582-1231) takes the MK-400/G or MK-525/G headset-microphone kit and the large size (FSN 8415-582-1230) takes the MK-401/G or MK-526/G kit. See TM 11-5965-235-12 (Aug 59) and Change 1 (Aug 63) on the headset-microphone kits.



SIX-CONDUCTOR CABLE — **Cracked, kinked, painted; damaged at switch case end;** loop clamp missing, loose.

Be sure and check cable at this point.

JJ-055 MIKE PLUG — **Rubber cracked; screws loose.**

JJ-055 PLUG RECEPTACLE — **Prongs bent, rusted.**

BOOM MOUNTING SCREW—**Loose.**

BOOM ADJUSTING KNOB—**Cracked.**

BOOM SUPPORT—**Rivets missing, loose.**

SWITCH HANDLE — **Cracked, won't work right.**

SWITCH HOUSING — **Case cracked, dented; mounting screws missing, loose.**

SHELL—**Cracked,** dirty; **rivets missing, loose.**

RUBBER EDGING—**Cut, loose,** dirty.

CLOTHES CLIP—Missing, broken.

**Be darned sure you never clip onto anything that can't leave the vehicle in a hurry with you. Your collar's a good place to clip.**

MALE BAIL-OUT CONNECTOR — **Rubber cracked; prongs bent, rusted.**

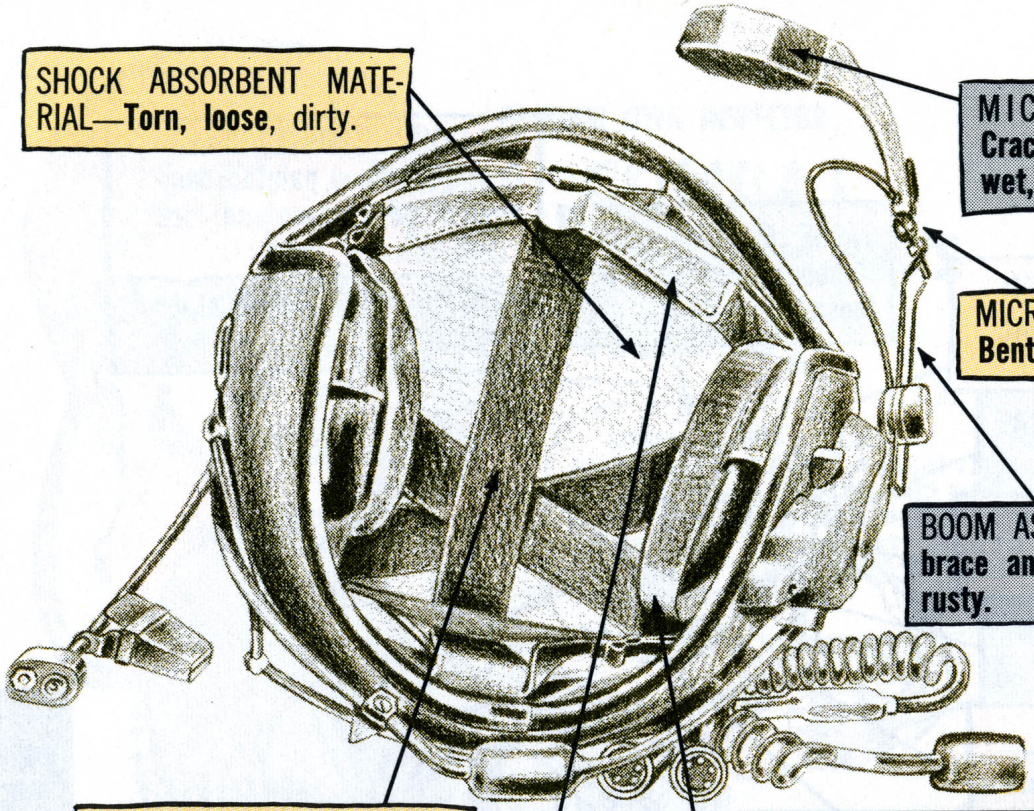
U-182/U PLUG—Dirty, **cracked, loose; prongs bent, rusted; moisture seal missing.**

FEMALE BAIL-OUT CONNECTOR—**Rubber cracked, dirty, joins loosely.**

RETRACTILE CORD—**Cracked, painted, kinked.**



PS MORE



SHOCK ABSORBENT MATERIAL—**Torn, loose,** dirty.

MICROPHONE — **Cracked, dirty; grids wet, clogged.**

MICROPHONE CLIP— **Bent, rusted.**

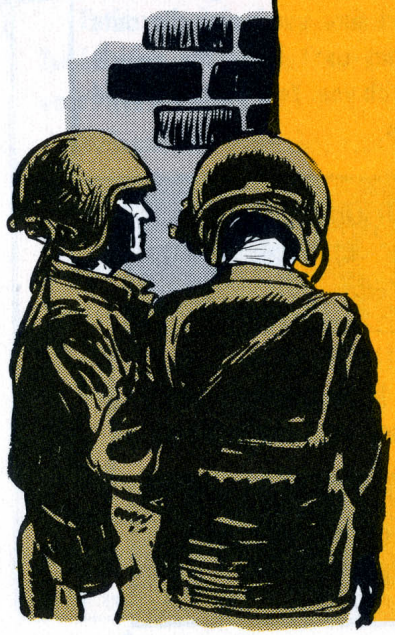
BOOM ASSEMBLY — **Boom, brace and cord guide bent, rusty.**

WEBBING—**Torn,** dirty, **elastic dead; eyelets, clips damaged, rusty.**

One thing you've got to watch out for: Never poke anything sharp into the grids of the microphone and earphones to clean 'em.

SWEATBAND — **Torn,** dirty, **elastic dead; steel clip bent, rusty.**

EARPHONES — **Quick-disconnect coupling loose; grids dirty, wet, clogged; pocket assembly torn, seams loose; separated from shell.** Foam rubber inserts cut, torn, missing.



**Be sure you use only soap and water to wash those bands. And let 'em dry out good. A coupla drops of neat's foot oil'll keep the leather from getting brittle.**

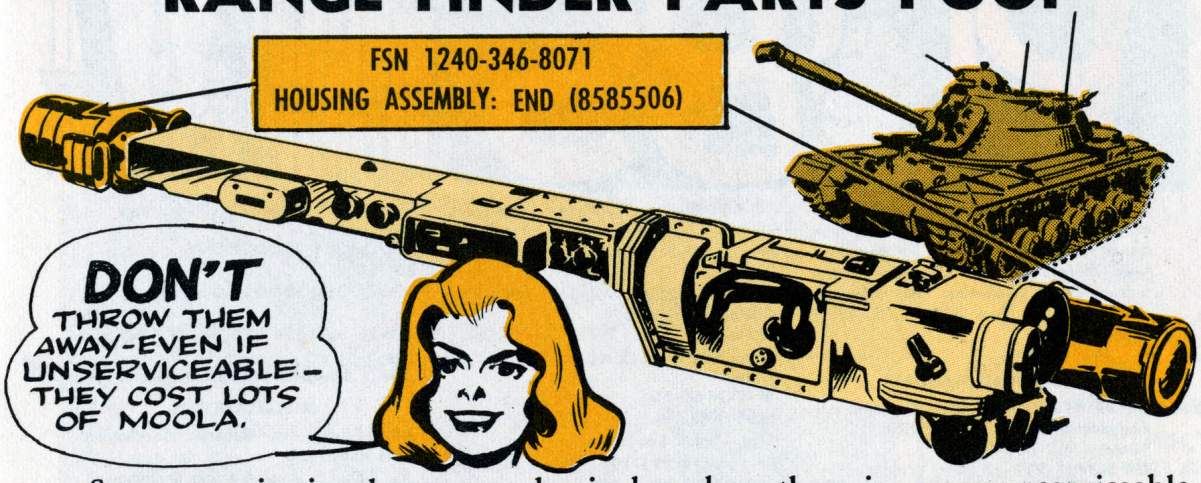
**Your helmet'll take good care of you while you're wearing it. The least you can do is take care of it while it's off your noggin.**

**Like, for instance, when you're carrying it, hold it by the front end of the shell or cradle it like a basketball. Don't use the boom or the cable for a handle.**

**And when you store it temporarily, place it face down on a shelf or whatever, with the mike boom pivoted to the top.**

**That helmet's one piece of equipment that'll help you keep your head when things get rough.**

# RANGE FINDER PARTS POOP

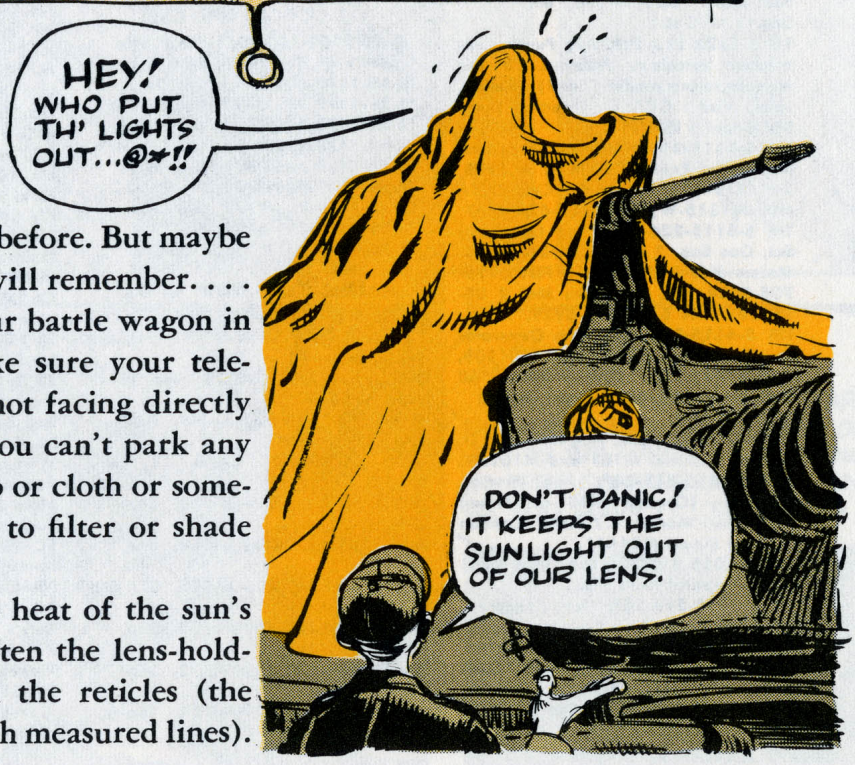



Some organizational turret mechanics have been throwing away unserviceable end housing assemblies when they replace an M17B1C rangefinder on an M48A1 or M48A3 tank.

TM 9-2350-224-20P (May 63) and Ord 7 G254 (Dec 56) show no recovery code for the end housings . . . but that's a mistake, Jake!

Supply wants those housings back with special handling. They're strictly non-expendable repair parts—on account of they cost $396 per each.

# PULL DOWN THE SHADE!




Sure, it's been said before. But maybe this time more guys will remember. . . .

When parking your battle wagon in bright sunlight, make sure your telescope or periscope's not facing directly into the sun. Or, if you can't park any other way, toss a tarp or cloth or something over the scope to filter or shade the lens.

Otherwise . . . the heat of the sun's focused rays may soften the lens-holding cement or crack the reticles (the glass disk marked with measured lines).

*A selected list of recent publications of interest to Organizational Maintenance Personnel. This is a list compiled from recent Adjutant General's Distribution Center Bulletins. For complete details see DA Pam 310-4 with latest changes.*

## TECHNICAL MANUALS

**TM 3-1040-225-35,** Aug Compressor, Reciprocating 50 CFM, 3,000 PSI (Davey Mdl B51RCDV).

**TM 5-3431-211-15,** Aug Welding Set, Arc, Inert Gas Shielded Consumable Metal Electrode for 3/64 In Wire, DC, 11tV (Air Reduction Mdl 2351 0685).

**TM 5-3805-231-25P,** Aug Scraper, Earth Moving, Towed: 18 Cu Yd Struck Cap Scoop; Hydraulic; 2 Whls, Pneum Tires (Euclid Mdl 58SH-G).

**TM 5-3895-208-20,** Aug Mixer, Bituminous Material Diesel Driven, Trailer Mtd, Barber-Greene Mdl 848, FSN 3895-221-1807.

**TM 5-3895-254-20P,** Jul Distributor, Bituminous Material, Tank Type: Gasoline Engine; Truck Mtg; 800 Gal Cap (Etnyre Mdl MIL-D32).

**TM 5-3895-263-20P,** Aug Roller, Motorized: Gas Eng; 3 Wheel; 10 Ton (Huber-Warco Model E-1012-M).

**TM 5-4320-218-25P,** Aug Pump, Centrifugal, Petroleum, Gasoline Engine, Trailer Mtd; 4 Inch 350 GPM, 275 Foot Head (Gorman-Rupp Mdl 04A12-MVG4D).

**TM 5-4320-225-20P,** Aug Pump, Centrifugal: Petroleum Pipeline, (Barnes Manufacturing Model CE4P4) (Reiner, John, Model GP75) (Peerless Pump Div Model 4 INUSPL).

**TM 5-6115-218-20P,** Aug Generator Set, Diesel Engine: 100KW, AC/208, 240/416V, 3 Phase, 60 Cyc (JETA MD1001815-W) FSN 6115-624-2767.

**TM 5-6115-236-25P,** Aug Generator Set, Gas Eng, 2 KW, DC, 12V, (U. S. Motors Mdl 2 US-17421) FSN 6115-708-0034, (U. S. Motors Mdl 2 US-18086) FSN 6115-816-5929.

**TM 5-6115-238-20P,** Aug Generator Set, Diesel Eng: 60 KW, AC, 120/208, 240/416V, and 120V, 3 Phase, 60 Cyc; (International Fermont Model M60-DTT-SH6).

**TM 9-1015-203-ESC,** Aug Howitzer, Lt, Towed, 105-mm, M101 and M101A1.

**TM 9-1015-215-20P,** Aug Mortar, 4.2-Inch: (Cannon M30 on Mount M24) and Mortar, 4.2-Inch: (Cannon M30 on Mount M24A1).

**TM 9-1055-215-12,** Sep (Prorated) (Supplemental ID to NG).

**TM 9-1055-215-20P,** Oct (Supplemental ID to NG).

**TM 9-1400-322-14,** Sep Sergeant, Grnd Hdlg, Trng Devices (All), Oper & Maint, Test Equip (Ord).

**TM 9-1400-500-12/2,** Sep Hawk, System Description.

**TM 9-1430-251-12/1,** Aug Nike-Herc, Nike-Herc (Imp), Ground Con Equip.

**TM 9-1430-255-12/1,** Aug Nike-Herc, TM, Ground Con Equip.

**TM 9-1430-502-12/2,** Sep Hawk, TM, Ground Con Equip.

**TM 9-1430-268-12P/2,** Sep Nike-Herc, Nike-Herc (Imp), Ground Con Equip.

**TM 9-1440-250-12P/1/1,** Aug Nike-Herc, Nike-Herc (Imp), Ground Handling, Spt & Svc Equip.

**TM 9-6920-375-12P/2,** Sep Pershing, Training Devices (All).

**TM 10-500-1,** Sep Airdrop of Supplies and Equip, Rigging Components of U. S. Army Air/Ground Pickup System.

**TM 10-3930-235-10,** Sep Truck, Lift, Fork, Gas, 4,000 lbs cap: Towmotor Mdls 462SG4024-100 (Solid Tire) MHE-191; (Pneum Tire) MHE-190.

**TM 10-3930-408-20,** Sep Tractor, Wheeled, Whse; Army Mdl MHE-180, Clark Mdl CTA-40-1615160-RS.

**TM 11-5820-514-15,** Jul Radio Set AN/MRC-95.

**TM 11-5820-520-12,** Aug Radio Set AN/GRC-106.

**TM 11-6125-239-15,** Aug Motor-Generator PU-544/A.

**TM 11-6125-240-15,** Aug Motor-Generator PU-545/A.

**TM 11-6625-450-25P,** Aug Test Set Batteries TS-183A/U and TS-183B/U.

## TECHNICAL BULLETINS

**TB 10-3900-200-20/1,** Sep Rifle Brackets on Terrain Forklift Trucks.

**TB 55-1510-202-20/4,** Oct OV-1.

**TB 55-1520-201-34/2,** Aug UH-19.

**TB 55-1520-201-50/1,** Oct UH-19.

**TB 55-1520-202-34/4,** Sep CH-34.

**TB 55-1520-205-34/7,** Sep CH-21.

**TB 55-1520-206-34/1,** Sep OH-23.

**TB 55-2810-206-20/1,** Sep U-8.

**TB 55-2810-207-20/2,** Sep O-1.

**TB 55-8115-201-30/1,** Sep All A/C.

## MODIFICATION WORK ORDERS

**MWO 9-2300-224-20/15,** Sep M113 Carrier Series Vehicles: M132 Fuel Line Replacement Kit.

**MWO 9-2330-212-20/9,** Sep Nike-Ajax, Vehicles.

**MWO 55-1510-204-34/49,** Sep OV-1.

**MVO 55-1520-203-34/8,** C1, Sep, CH-37.

**MWO 55-1520-204-34/12,** Sep OH-13.

**MWO 55-1520-204-34/18,** Sep OH-13.

**MWO 55-1520-206-34/13,** C1, Sep OH-23.

**MWO 55-1520-209-20/24,** Sep CH-47.

**MWO 55-1520-209-34/22,** Sep CH-47.

**MWO 55-1520-209-34/64,** Sep CH-47.

**MWO 55-1520-210-20/5,** Sep UH-1D.

**MWO 55-1520-210-34/6,** C1, Sep UH-1D.

**MWO 55-1520-211-34/26,** Sep UH-1.

**MWO 55-1520-211-34/27,** Sep UH-1.

**MWO 55-1610-209-35/1,** Sep OV-1.

## MISCELLANEOUS

**AR 135-8,** Aug Reserve Component Unit Readiness.

**AR 725-15,** Aug Aircraft Distribution.

**DA Cir 55-8,** Aug Trans Movements Guide.

**DA Cir 350-12,** Aug Training of Enlisted Personnel in Venereal Disease Contact Interview and Investigation.

**DA Cir 700-2,** Sep Reinforced Paper Wipers.

**DA Cir 750-4,** Sep Materiel Readiness, Equip Serviceability Criteria.

**DA Cir 750-5,** Sep Submittal of DA Form 2028.

**DA Form 2841 and DA Form 2841-1,** Aug Reserve Component Unit Readiness Report.

**DA Pam 750-3,** Jun Integ Equip Record and Maint Manag System.

**FM 6-40-1,** Sep Field Artillery—Honest John/Little John Rocket Gunnery.

**FM 6-40-3,** Sep Field Artillery Gun Direction Computer M18 Gunnery.

**FM 20-15,** Sep Tents & Tent Pitching.

**LO 9-2320-208-12,** Feb Truck, M38A1, M38A1C, M38A1D, and M170.

**LO 10-3930-237-20-1,** Sep Truck, Lift, Fork, Gas, 2000 lb; Army Mdl MHE-192, Clark Mdls C20B-1632032-100 and C20B-1632033-127.

**LO 10-3930-238-20,** Sep Truck Lift, Fork, Gas, 6000 lb cap (Baker Mdl FJF-060, Army Mdl MHE 193).

**LO 10-4230-202-15,** Aug Delousing Outfit: Power Driven, Gasoline Engine; w/10 Dusting Guns (Johnson Service Co. Mdl 252 QM) w/Wisconsin Engine Model MACND.

**SB 11-506,** Sep Requisition of Generator Set PU-532/PPS-4.

**SB 38-100,** Aug Preservation, Packaging, and Packing Materials, Supplies and Equip.

**SC 1070/80-IL,** Aug FSC Group 10 Weapons: Class 1070 Nets and Booms, Ord; 1075 Degaussing and Mine Sweeping Equip; 1080 Camouflage and Deception Equip.

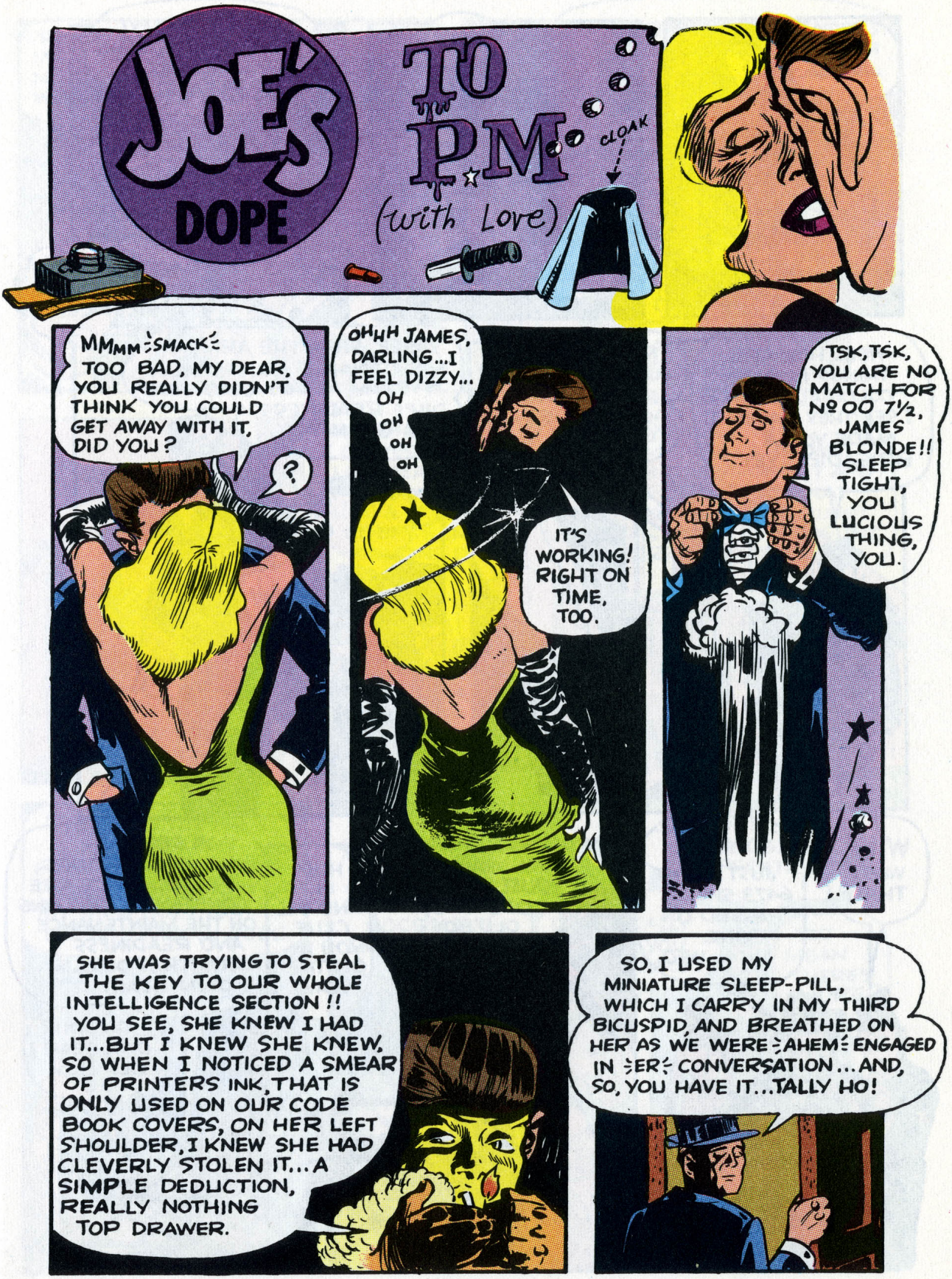
**SC 2090-93-CL-E03,** Sep Repair Kit, Inflatable Craft: for Bladder Type or Nonbladder Type Boats.

**SC 4220-93-CL-E02,** Aug Div Equip Set: 2 Persons; 100 Ft Depth.

**SC 5180-93-CL-E10,** Sep Tool Kit, Pioneer, Engr Combat Platoon.

**SC 5180-93-CL-E11,** Sep Tool Kit, Pioneer Engr Platoon.

**TA 50-942,** Aug J and Q Type Vessels.


JOE'S DOPE
TO PM
(with Love)
CLOAK
MMMM SMACK TOO BAD, MY DEAR, YOU REALLY DIDN'T THINK YOU COULD GET AWAY WITH IT, DID YOU?
?
OHHH JAMES, DARLING...I FEEL DIZZY... OH OH OH OH
IT'S WORKING! RIGHT ON TIME, TOO.
TSK, TSK, YOU ARE NO MATCH FOR Nº 00 7½, JAMES BLONDE!! SLEEP TIGHT, YOU LUCIOUS THING, YOU.
SHE WAS TRYING TO STEAL THE KEY TO OUR WHOLE INTELLIGENCE SECTION!! YOU SEE, SHE KNEW I HAD IT...BUT I KNEW SHE KNEW, SO WHEN I NOTICED A SMEAR OF PRINTERS INK, THAT IS ONLY USED ON OUR CODE BOOK COVERS, ON HER LEFT SHOULDER, I KNEW SHE HAD CLEVERLY STOLEN IT... A SIMPLE DEDUCTION, REALLY NOTHING TOP DRAWER.
SO, I USED MY MINIATURE SLEEP-PILL, WHICH I CARRY IN MY THIRD BICUSPID, AND BREATHED ON HER AS WE WERE AHEM ENGAGED IN ER CONVERSATION... AND, SO, YOU HAVE IT...TALLY HO!

PSSST! JAMES...
?
YES!
EEEK!
COUSIN ASHLEY! DON'T EVER SNEAK UP LIKE THAT... PLEASE!
WOW! A REAL BERETTA, WITH A SILENCER YET...
WELL, HOW ARE THINGS IN THE "COLONIAL" ARMY? I SEE THEY HAVEN'T MADE YOU A BRIGADIER YET...
NO, BUT THEY MADE ME A REAL INTELLIGENCE AGENT, JUST LIKE YOU.
YASEE...WITH THE ARMY MAINTENANCE MANAGEMENT SYSTEM, ALL US GUYS ARE =ULP= READINESS A-G-E-N-T-S...
WOW!
WHO WAS THAT?
=YAWN= JUST AGENT 6473, SHE PASSED ON SOME VITAL INFO.
FORGET HER... NOW... HOW DOES YOUR NETWORK OPERATE, OLD BOY?
HOP IN, AND I'LL CLUE YOU IN ON THE WAY.
YA SEE, ALL US OPERATORS 'N' MECHANICS ARE CONSTANTLY CHECKING ON THE MAINTENANCE AND READINESS CONDITION OF OUR OWN GEAR.
ON YOUR OWN GEAR? OLD BOY.

RIGHT! AND THEN WE FEED THIS INFO THROUGH OUR "INTELLIGENCE" NETWORK BACK TO THE PEOPLE WHO ANALYZE AND EVALUATE IT.
RATHER INTRIGUING. STOP HERE, PLEASE.
THIS KEEPS THE COMMANDERS POSTED ON THE READINESS OF OUR EQUIPMENT...AND ALSO PROVIDES THE MAINTENANCE AND DESIGN PEOPLE WITH THE FACTS THEY NEED FOR IMPROVING THE EQUIPMENT...
STOP HERE? WOTF'R.
THAT'S WHAT FOR!
WOW!
NOW! WHERE WAS I. OH YES, SOUNDS LIKE REAL VITAL INFO! YOU USE A CODE, OF COURSE, IN SENDING IT BACK.
WHENEVER POSSIBLE, YES.
FOR EXAMPLE THIS DA FORM 2408-3 IS ONE OF OUR BIG WEAPONS. IT AND THE DA FORM 2407 THAT WE USE FOR WORK REQUEST AND EIRS ARE THE BIG GUNS IN "OPERATION TAERS".
"TAERS" IS THE NAME FOR THE ARMY EQUIPMENT RECORDS PROCEDURES. MOST OF MY INFO GOES ON THESE--AND IN CODE.
THESE FORMS AND RECORDS AND THE WHOLE TAERS OPERATION ARE COVERED IN A REAL SPECIAL DOCUMENT- TM 38-750.
TM 38-750
DIABOLICALLY CLEVER, YOU "COLONIALS".
BUT, THIS IS JUST ONE OF OUR INTELLIGENCE OPERATIONS.
YOU MEAN THERE'S MORE?

JOE'S Dope Sheet
ALL THIS CHECKIN', RECORDIN' AND REPORTIN' PAYS OFF HERE . . . SO, MAKE SURE ALL YOUR ENTRIES ARE COMPLETE, TIMELY AND ACCURATE.
WE HAVE THE WORLD'S BEST EQ
IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULL

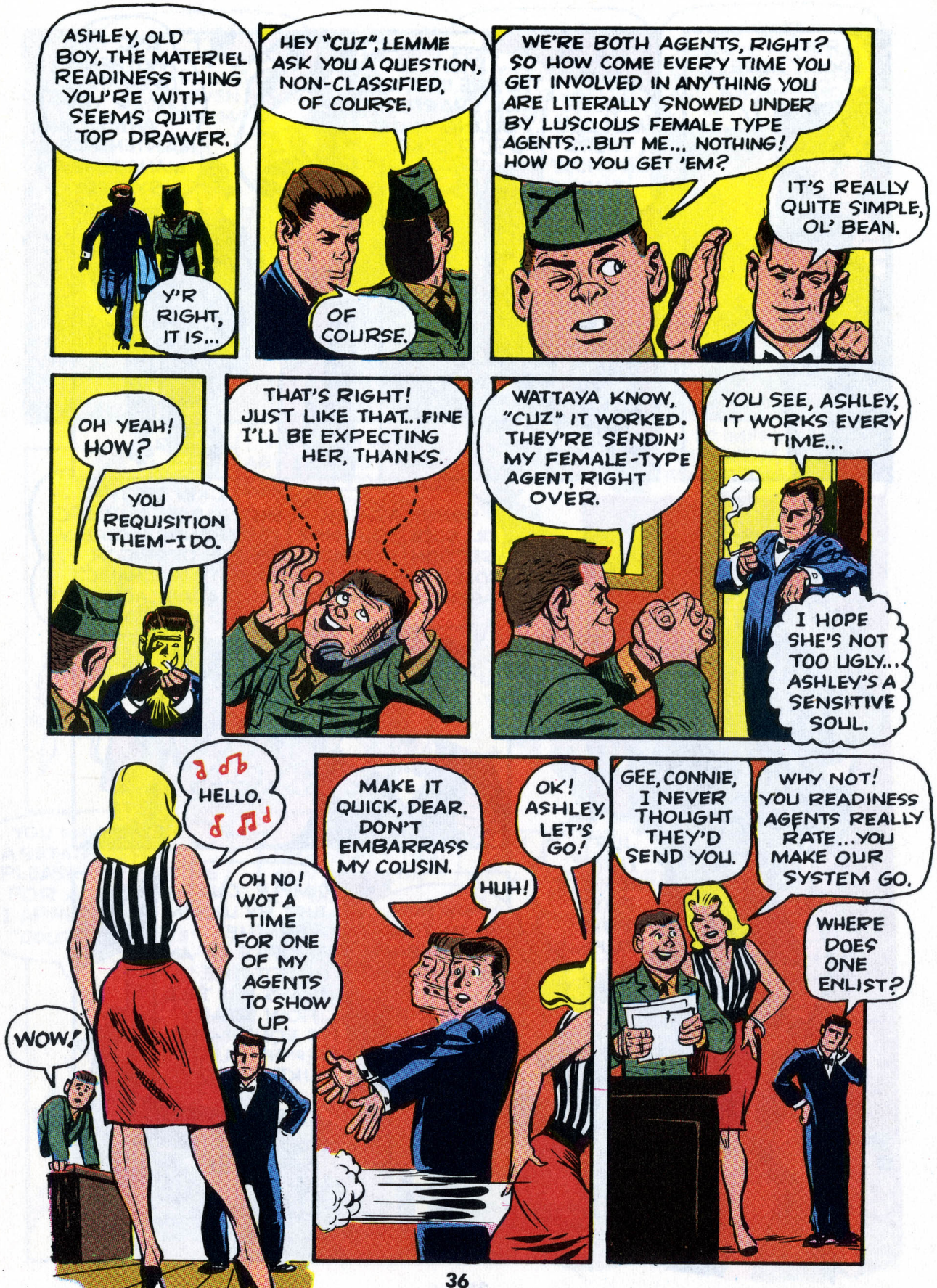
IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

QUIPMENT... *Take care of it*

ETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

HEY "CUZ", WE GOT A THING GOING FOR US THAT I DOUBT EVEN YOUR OUTFIT HAS.
THIS IS IT, BLONDE!
THAT'S "INFO FEED-BACK"...ALL THE PROCESSED DATA IS COMPILED AND WE GET IT IN THE FORM...
...OF "EIR DIGESTS," ALL THE SUGGESTIONS, FIXES AND IMPROVEMENTS IN...
...PROBLEM AREAS ARE INCLUDED TO KEEP US POSTED ON DEVELOPMENTS...
...TO IMPROVE OUR EQUIPMENT, BESIDES REPORTING ON ITS CONDITION AND READINESS... THAT'S WHY ACCURACY IS SO IMPORTANT.
YOU HAVE QUITE A SET-UP, ASHLEY... PLEASE EXCUSE ME FOR A BIT, WHILE I APPLY THE "COUPE DE GRÂCE".
HEY! WOT'S UP? WHO'S THAT GUY? WOTCHA DOIN'?
THUD!
THIS MUST COMPENSATE FOR ALL THEM DOLLS.
SO THEY CALL YOU A READINESS AGENT! VERY SHARP.
=ER= YEAH... REAL COOL =WHEW=

* EQUIPMENT SERVICABILITY CRITERIA


ASHLEY, OLD BOY, THE MATERIEL READINESS THING YOU'RE WITH SEEMS QUITE TOP DRAWER.
Y'R RIGHT, IT IS...
HEY "CUZ", LEMME ASK YOU A QUESTION, NON-CLASSIFIED, OF COURSE.
OF COURSE.
WE'RE BOTH AGENTS, RIGHT? SO HOW COME EVERY TIME YOU GET INVOLVED IN ANYTHING YOU ARE LITERALLY SNOWED UNDER BY LUSCIOUS FEMALE TYPE AGENTS...BUT ME... NOTHING! HOW DO YOU GET 'EM?
IT'S REALLY QUITE SIMPLE, OL' BEAN.
OH YEAH! HOW?
YOU REQUISITION THEM-I DO.
THAT'S RIGHT! JUST LIKE THAT...FINE I'LL BE EXPECTING HER, THANKS.
WATTAYA KNOW, "CUZ" IT WORKED. THEY'RE SENDIN' MY FEMALE-TYPE AGENT, RIGHT OVER.
YOU SEE, ASHLEY, IT WORKS EVERY TIME...
I HOPE SHE'S NOT TOO UGLY... ASHLEY'S A SENSITIVE SOUL.
HELLO.
WOW!
OH NO! WOT A TIME FOR ONE OF MY AGENTS TO SHOW UP.
MAKE IT QUICK, DEAR. DON'T EMBARRASS MY COUSIN.
HUH!
OK! ASHLEY, LET'S GO!
GEE, CONNIE, I NEVER THOUGHT THEY'D SEND YOU.
WHY NOT! YOU READINESS AGENTS REALLY RATE...YOU MAKE OUR SYSTEM GO.
WHERE DOES ONE ENLIST?

GAS UP A BIRD WITH THIS TUNE...

# REFUELING HARMONY

(WITH THE SERVICE MAN)

Ever bend an ear to a hit record and wonder what makes it good for a million copies? If you say a name singer, you're only partially right.

It's everything blended together into the right arrangement. That's the secret. That's what gives you real harmony, man—just like a refueling operation that's arranged in the right habit-forming order . . . with no sour notes.

## WHAT'S LOOSE?

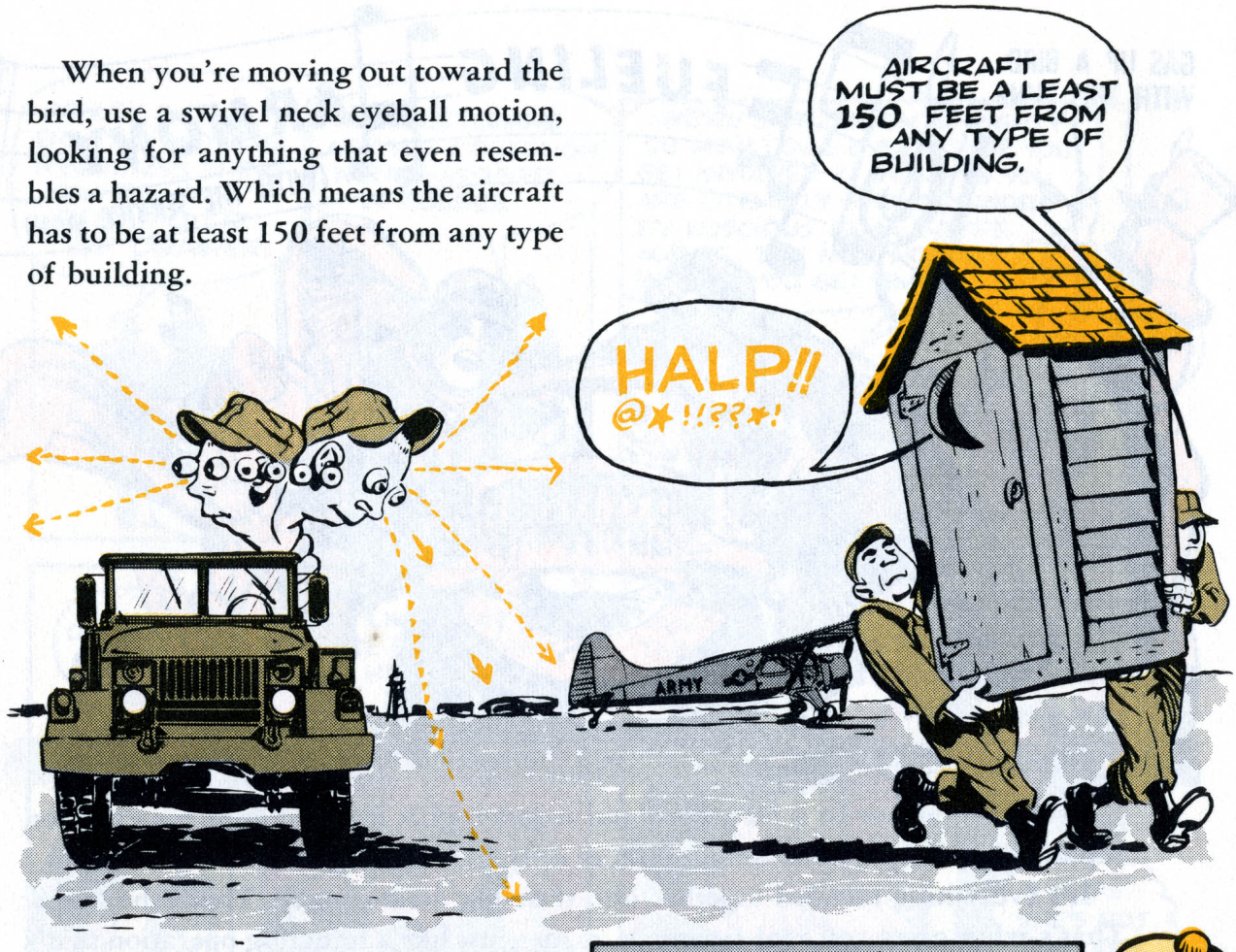
Before you get to the chorus of this melody, there's a refrain you want to learn that goes like this: "What's loose? Alles in der pockets und hands!"

That's right. Before you even head out of the hangar to refuel the bird that just landed . . . douse that butt and stash loose items in your pockets so they can't fall into a fuel tank.



P.S. MORE

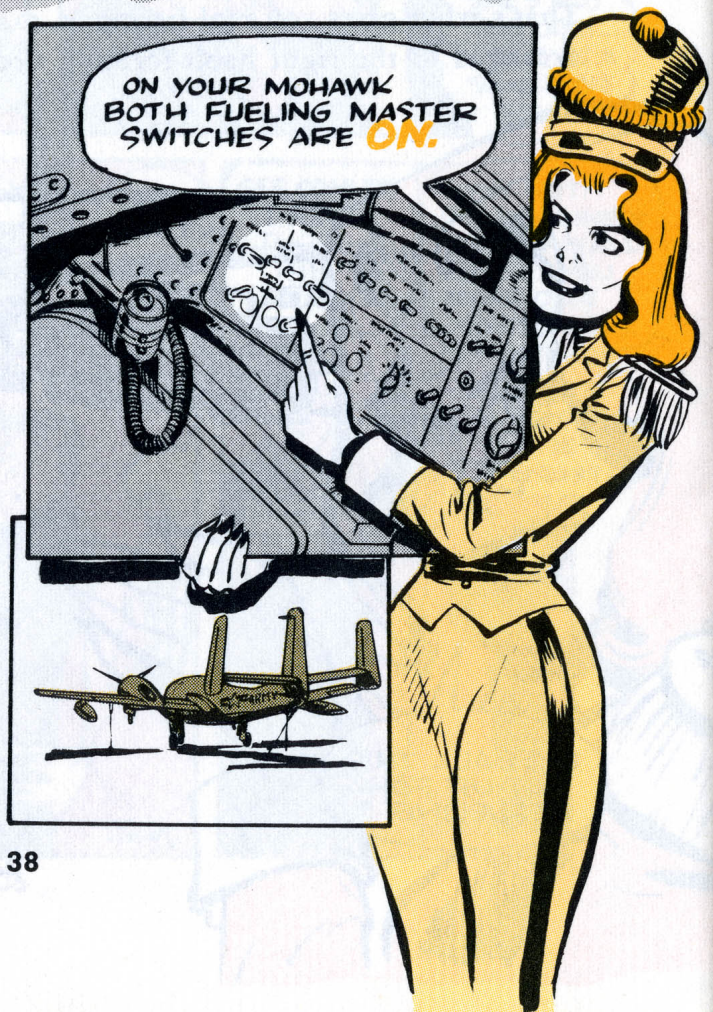
When you're moving out toward the bird, use a swivel neck eyeball motion, looking for anything that even resembles a hazard. Which means the aircraft has to be at least 150 feet from any type of building.




Any work being done within 50 feet has to stop, since metal tools and electrically operated equipment can give off a big fat spark. That means no working on the battery, keeping the APU out of range and removing the tug used for towing the aircraft to the fueling site.

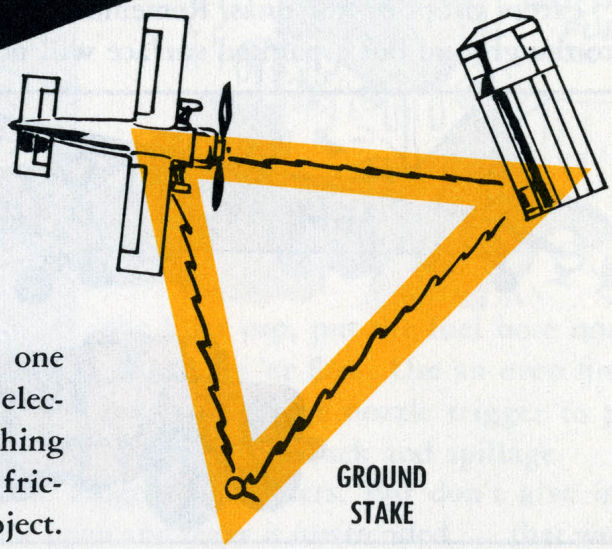
Next, check to see that **all** radio, radar, magneto and master switches are in the OFF position, with one exception. When pressure fueling the Mohawk (OV-1) the fueling master switches are left in the ON position.

Aside from any radar in the bird, remember that nearby aircraft may have their airborne radars operating. So, to play safe, make sure any such aircraft are at least 100 feet away—or ask the crew to turn off the radar.



## USE THE SAFETY TRIANGLE

Now you're ready to place the three basic elements . . . the aircraft—refueling unit—ground stake . . . in the triangle of safety.

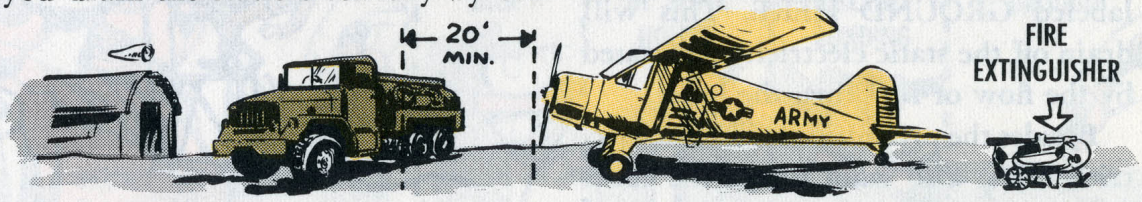



You're doing all this for just one reason—static electricity . . . the electrical charge that clings to anything movable and is built up by normal friction with the air or some other object. The aircraft and fuel truck are charged before you start fueling. Movement of the fuel from the truck through the hose to the aircraft gas tank also builds up static electricity.

So, unless the charge gets run off into the ground, it builds up to the point where a spark will arc across an inch or two gap toward any type of metal approaching it . . . like a fuel hose nozzle. This is definitely not the preferred type of sparkin' encountered on a 24-hr pass!

When you're fueling from a fixed installation, such as an island or pit, you drain the static electricity by connecting the grounding cable from the pit to the aircraft. Then you connect the nozzle bonding wire to the bird before opening the filler cap. Reverse this set-up when you disconnect.

But if you're using a mobile fuel supply you have to make sure it's parked in a position to get off the field quickly, if necessary. So, park it on the downwind side at least 20 feet away from the aircraft.

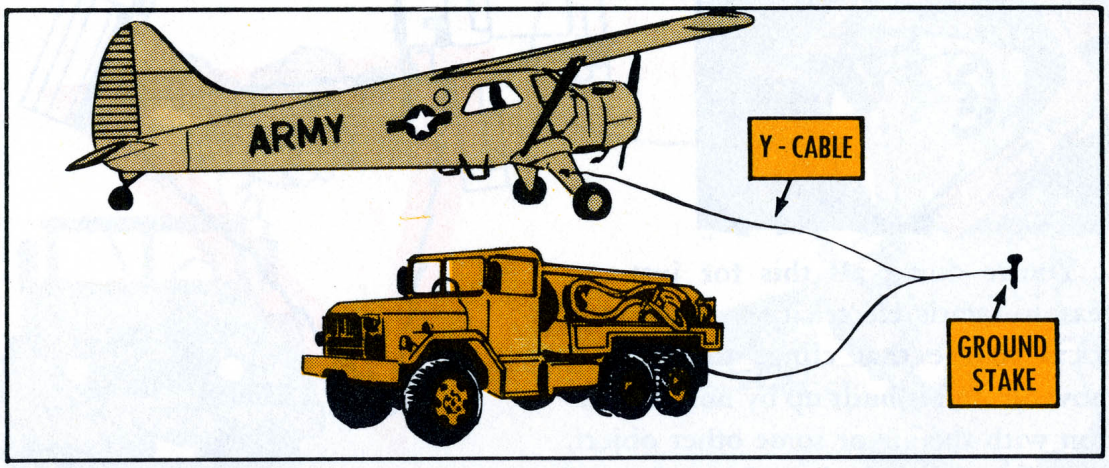



Next you check on the location of the auxiliary portable fire extinguisher and place it out of your way but close enough to operate fast in case . . . well, just in case.



PS MORE

With the aircraft and tank truck in position, you ground both by using a "Y" hookup. Some of the M49C tactical type fueling vehicles have a built-in "Y" cable permanently hooked up to the cable reel in the truck's rear compartment. So all you do is connect one side of the "Y" to the ground rod, the other side to the aircraft's landing gear axle or some other unpainted metal part of your bird . . . except props or antennas. Remember that bare metal will conduct electricity into the ground but a painted surface will not.




Now there're still tank trucks, both military and commercial types, that don't have this "Y" cable. So you can make your own "Y" rig each time you fuel. Just hook one cable between truck and ground and the other between the aircraft and truck ground cable.

This set-up gives you electrical harmony. The charge between the truck and the bird is equalized and drains off into the ground.

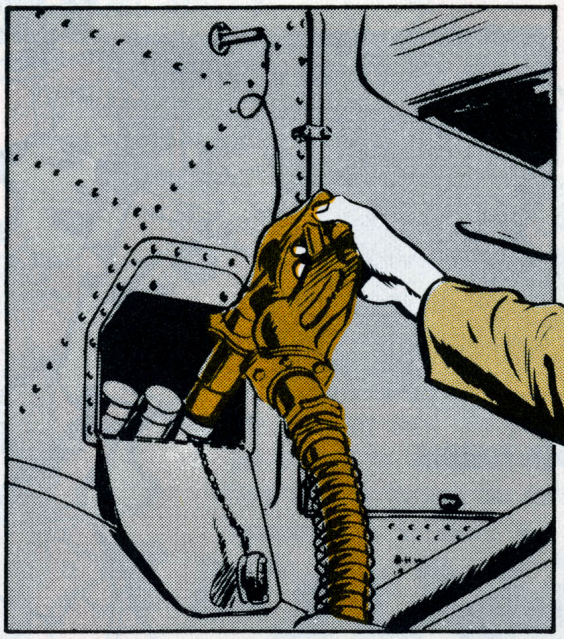
Just before you start fueling, plug the nozzle bonding jack into the female receptacle located near the fuel filler cap in the fuselage or wing which is labeled GROUND HERE. This will drain off the static electricity generated by the flow of fuel thru the hose.

Besides the precautions for static electricity, you also want to eye the cone-shaped filtering screen inside the nozzle for any signs of spreading or breaks in the wire mesh.

Another point to keep in mind any time you have to use a maintenance stand is to see that it's well **balanced** and **clean**. Then you won't fall bass

over teakettles and end up singin' the blues.

## SHOOT THE WORKS



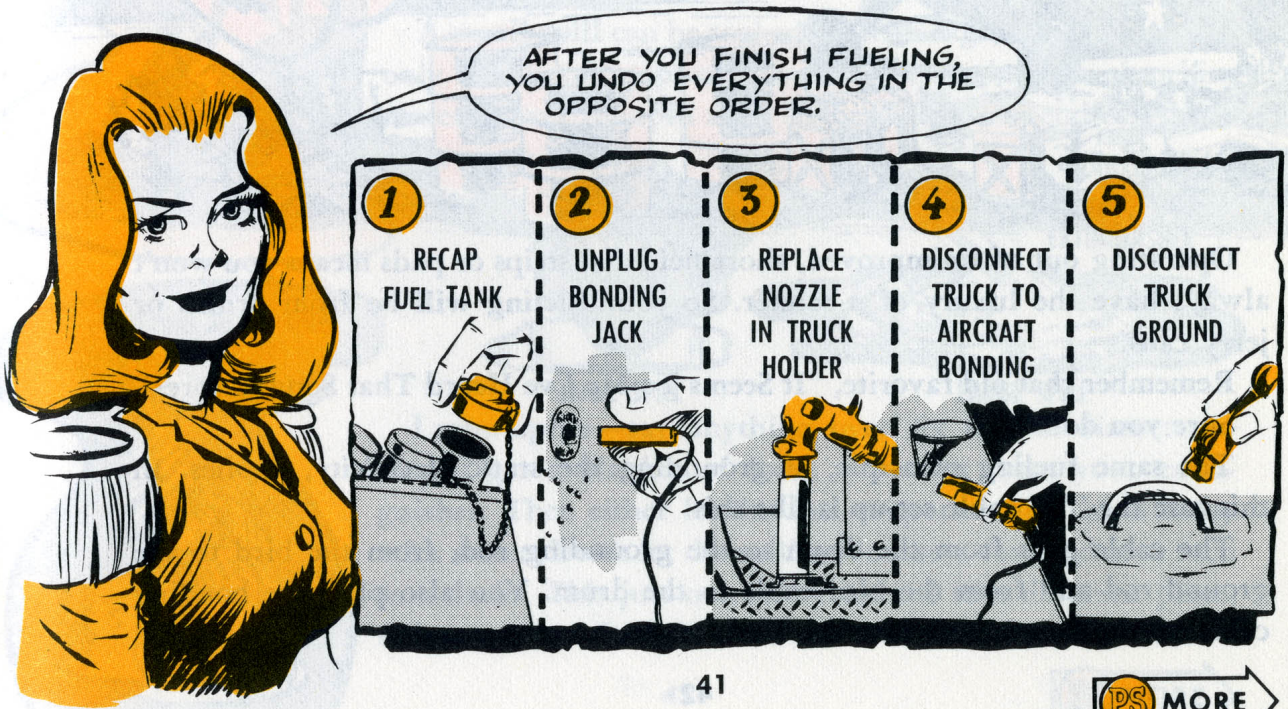
With all your bonding and precautionary checks taken care of, take off the filler cap, put the fuel hose nozzle in and let 'er flow. Use an even finger pressure on the nozzle trigger to prevent fuel kickback and spillage.

Some fueling jobs are gonna take longer than others. But don't give in to that temptation to wedge the nozzle open and leave it unattended . . . that would be asking for trouble!

For one thing, the nozzle can damage the internal baffles in the fuel tank. For another, the nozzle could slip out of the filler neck and give you a spillage problem.

'Tis sweet music—"Yes Indeed"—that Avgas rushing into the thirsty bird. Easy on the trigger now, as you top 'er off.

## REVERSE EVERYTHING






PS MORE

## LOG IT, MAN

Before calling it quits, don't forget to enter the truck meter reading in Block 11 of DA Form 2408-13, in the log book.

Then get the truck off to a safe distance before returning the portable fire extinguisher to its storage area or to the fuel truck. Finally, recheck the aircraft for any signs of fuel leakage—inside and out.

## BOONDOCK FUELING

Operating out of unimproved, short field dirt strips or pads means you won't always have the luxury of a tanker. So your fueling will be from drums or jerry cans.

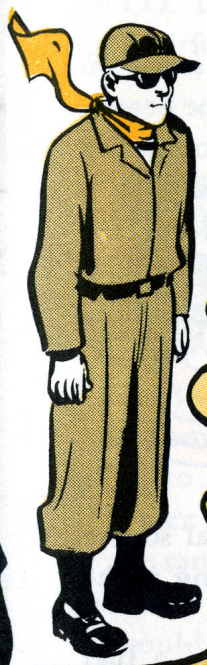
Remember that old favorite, "It Seems To Me I've Heard That Song Before?" Sure you do!

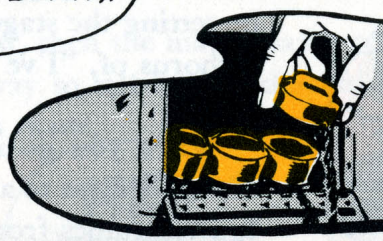
The same fueling principle, of grounding the static electricity, applies. In this case the "Y" cable set-up is like this.

The cable goes from the drum to the grounding rod, from the bird to the ground rod and from the bird cable to the drum. You also plug the bonding cable on the hose nozzle into the bird.

## HALT FOR SPILLS

FUEL SPILLS DO HAPPEN FROM TIME-TO-TIME, SO YOU WANT TO BE PREPARED TO ACT QUICK, LIKE A BUNNY.

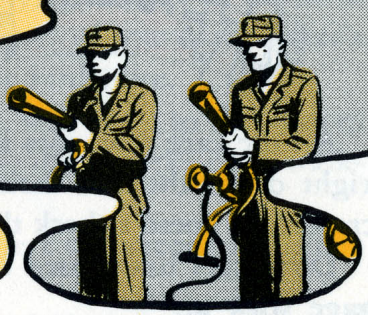




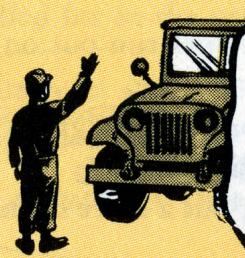
1. Stop refueling. Then pull the nozzle out and replace the cap on the aircraft fuel tank.

2. See that any crew and passengers get out of the aircraft. Keep them from walking through the spill area because nails in shoes can cause sparks.

3. Call for a standby fire crew.



4. Don't move any engine-operated equipment in the area—that includes your fuel truck. A random spark or backfire is all it takes.



**A small spill** can be soaked up with rags, dirt or sand. Use only **nonmetal** mops or shovels in scattering the absorbing material over the spill area. Remember that metal can throw off a spark.

RAG

SMALL SPILL

BLANKET OF FOAM FROM EXTINGUISHER

LARGE SPILL

5. Clean up the spill.

**Large spills**—say anything over six feet in diameter—should get a blanket of foam treatment from your extinguisher. Then either let the fuel evaporate or flush it away with water. Don't let the spill settle into a confined area such as a drain. This just moves the hazard to a different place, unless you can flush it.



PS MORE

## PROTECT YOURSELF

Any time you get fuel on your skin or clothing, leave the area immediately —if not sooner. If you don't, you could be setting the stage for a skin rash and a chorus of, "I've Got You Under My Skin. . . ."

When you go indoors, be sure you don't get close to any flame-type heater. Ignited fumes from soaked clothes can ruin your entire day.

Strip your duds and head for the shower. Soap and water are the best treatment for you . . . and your clothes.

## FUELING HARMONY (WITH THE CREW CHIEF)

All the care that goes into keeping fuel clean—from the commercial source right down the line thru the fueling operation—doesn't mean a thing if the crew chief doesn't check the fuel in his bird.

Dirty fuel has caused more aircraft to auger in than you can shake a fuel gage stick at.

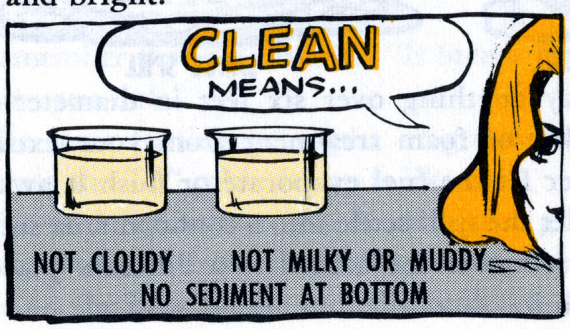
### SO . . . SAMPLE THE JUICE

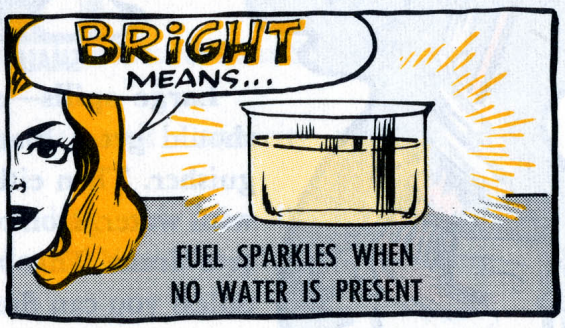
Using the fuel tank sumps drain, let a small amount of fuel run out on the ground through your fingers.

Watch for bubbles in the fuel, which is a clue to water content, or a gritty feel on your fingers, which tells you there's some foreign material there.

This procedure is OK for detecting gross contamination, but a more scientific check should be made by either the pilot or crew chief.

Draw off the fuel sample in a clear, clean glass jar big enough to take one-half to a pint of the juice. Let it settle for about five minutes to see if it's "clean and bright."

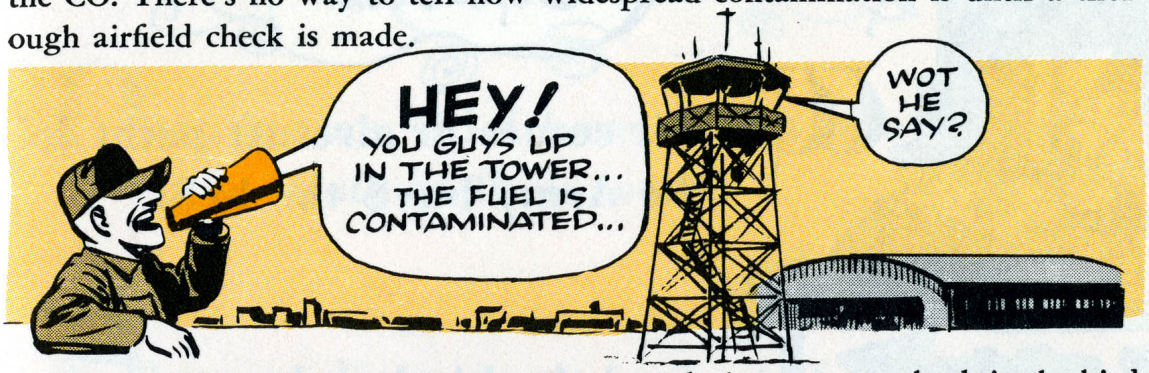


You'll have to let JP-4 settle about four times as long and also check for any signs of scum.

If your first sample does not come out clean and bright go back for some more. Then, if a whole quart shows the same contamination, sing up a storm, loud and clear.

Notify the pilot first, then the maintenance officer, the tower, POL officer and the CO. There's no way to tell how widespread contamination is until a thorough airfield check is made.



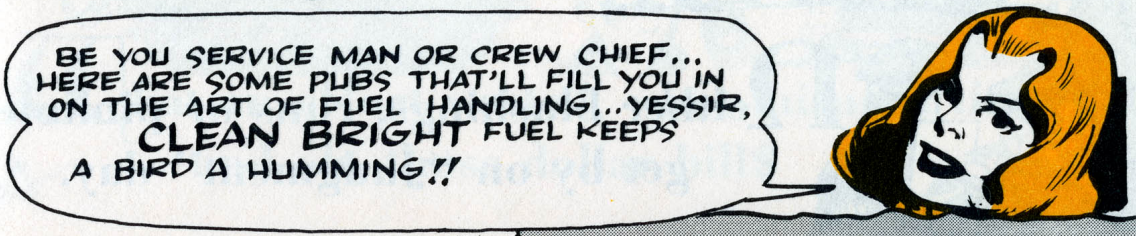

Clean or dirty, throw out the sample you took; it never goes back in the bird.

Remember that condensation takes place in the fuel tank of your bird. There's going to be some water, no matter how slight, in the bird juice.

Water and dirt, being heavier than Avgas or JP-4, will settle to the bottom of the tank, which is one of the reasons a pilot hits the drain cocks on a walk-around.

Should any dirt find its way to the carburetor, tho, there are screens and filters that will help prevent it from fouling up the works.

But—and this is mighty important—these screens and filters have to be eyed as called for in the organizational maintenance pub for your bird.




TM 9-8022 (17 Dec 54) on the M49C truck.

TM 9-8024 (3 Oct 55) on the M217 truck.

TM 10-1101 (14 Sep 55), "Petroleum-Handling Equipment."

TM 10-1102 (4 Jan 63), "QM Petroleum Handling Operations in the Continental United States."

TM 10-1103 (18 Dec 62), "QM Petroleum Handling Equipment."

TM 10-1105 (9 Jan 63), "Inspecting and Testing Petroleum Products."

TM 10-1107 (26 Feb 60), "Petroleum Handling Operations For Aviation Fuel."

TM 10-1113 (24 Sep 59), "Petroleum Tank-Vehicle Operation."

TM 55-405-3 (10 May 62), "Maintenance of Aircraft Systems."

TB AVN 2 (5 Sep 61), "Recommended Fuels, Engine and Transmission Oils for Army Aircraft."



END

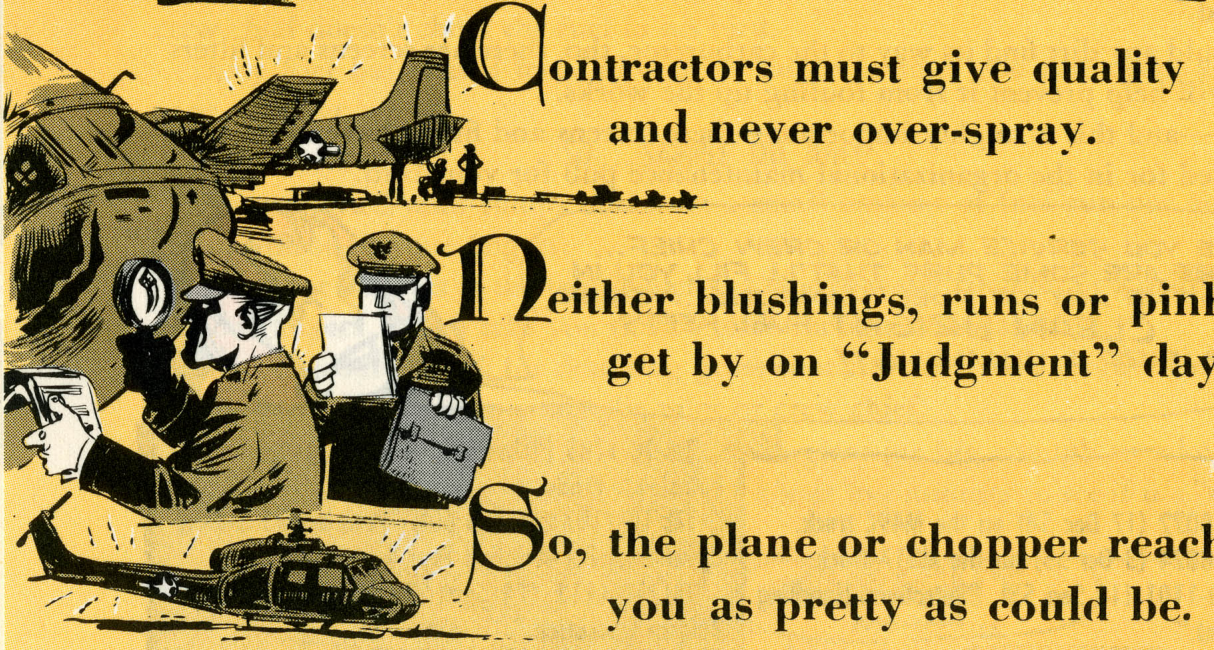
# TAKE IT EASY ON THEM

A Sad Song

## Chorus

When it comes to aircraft paint jobs
the Army buy$ the be$t.

It specs' the kind and type to use
and sets up rigid tests.



Contractors must give quality
and never over-spray.

Neither blushings, runs or pinholes
get by on "Judgment" day.

So, the plane or chopper reaches
you as pretty as could be.

And from here on in the fun
begins as you will quickly see.

# TAKE IT EASY ON THEM @#!$@#! REPAINT JOBS

A Sad Song by Windy Windsock

## Chorus

When it comes to aircraft paint jobs
the Army buy$ the be$t.

It specs' the kind and type to use
and sets up rigid tests.

Contractors must give quality
and never over-spray.

Neither blushings, runs or pinholes
get by on "Judgment" day.

So, the plane or chopper reaches
you as pretty as could be.

And from here on in the fun
begins as you will quickly see.



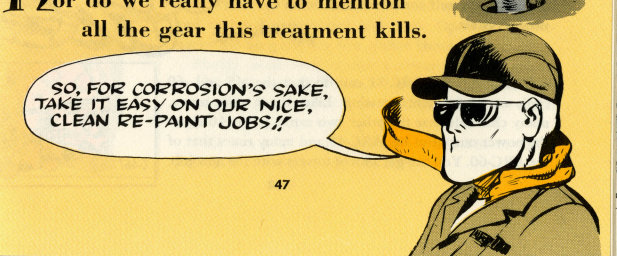
## Refrain

Now, a crew chief here, and a pilot there
so hasty in their work,

Slam cowlings down—and scuff and kick
like monkeys gone berserk.

What an effort wasted, what misused time
and oh, those dollar bill$

Nor do we really have to mention
all the gear this treatment kills.



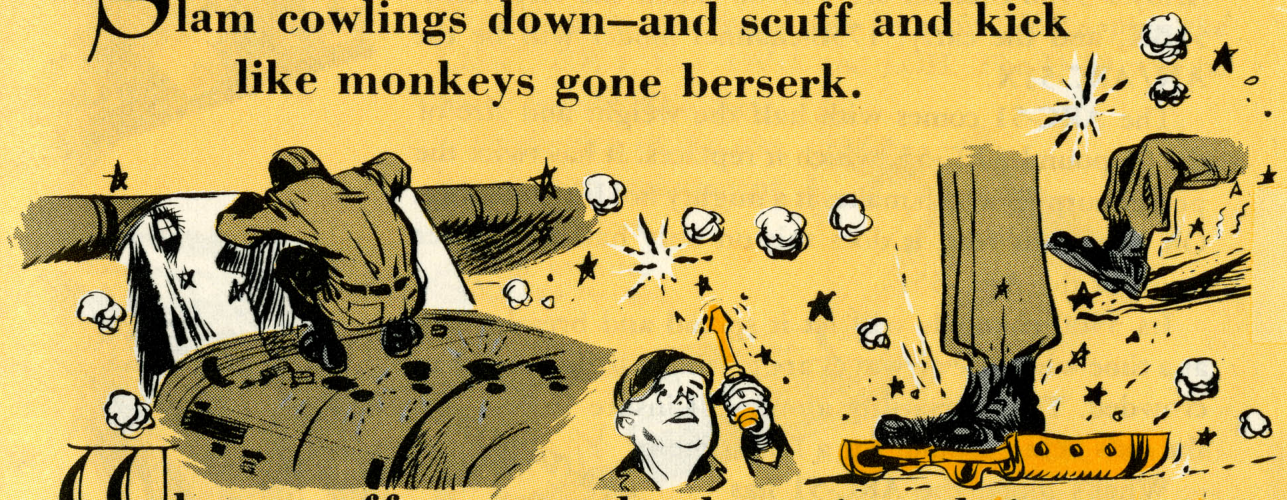
# @*!#$@#! REPAINT JOBS

by Windy Windsock

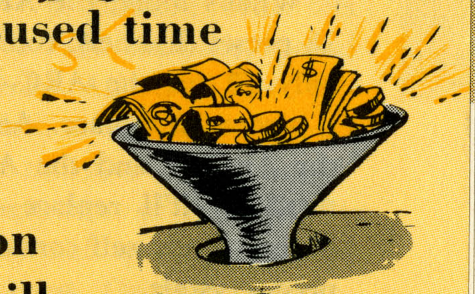
## Refrain

Now, a crew chief here, and a pilot there
so hasty in their work,

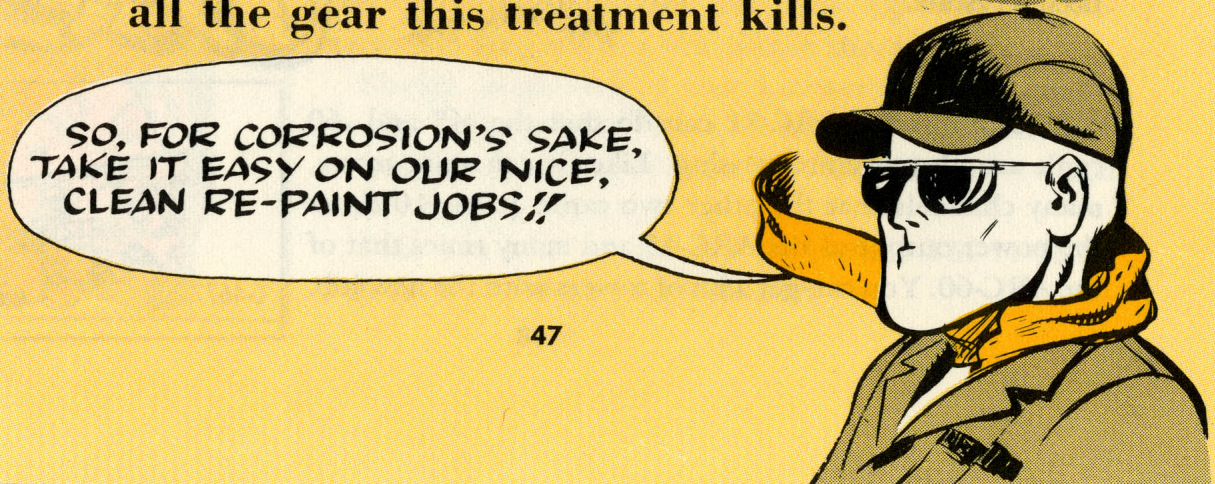
Slam cowlings down—and scuff and kick
like monkeys gone berserk.



What an effort wasted, what misused time
and oh, those dollar bill$



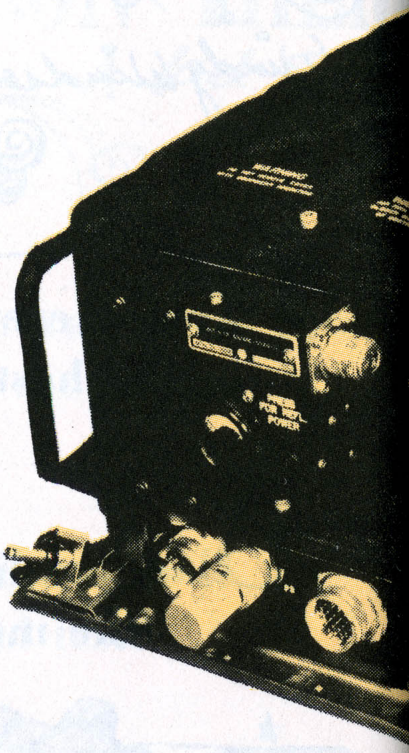
Nor do we really have to mention
all the gear this treatment kills.



SPREAD YOUR WINGS, AIR TYPES

# YOUR BIRDY'S

## COMMUNICATIONS



Some one of these baby blue days, when supply meets demand, your not-too-talkative bird is gonna become a chatterbox.

What's more, it'll be talkin' in three languages—Army, Navy-Marine and Air Force. Oh happy, happy day! And the words won't sound like they're comin' thru a mouthful of marbles.

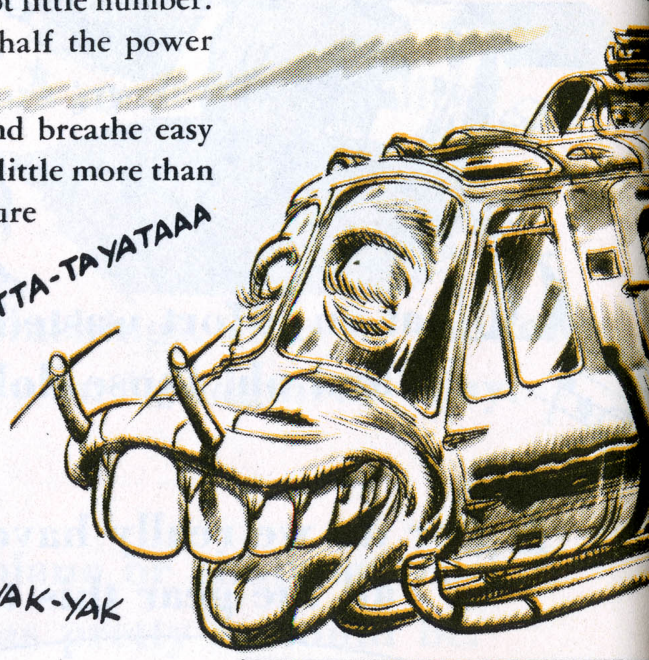
What's gonna cause all this ever-lovin' twitchin'?

The new AN/ARC-51 radio set—what else! The Army's 3500-channel set will be called the AN/ARC-51BX, and the early, 1750-channel model will be the AN/ARC-51X.

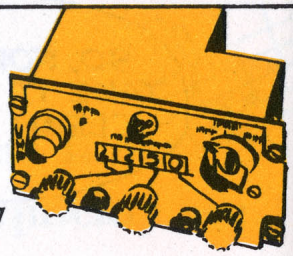
The ARC-51 comes with half the weight and size of the 65-pound ARC-55, which it replaces. It has twice the power output, which makes it a mighty hot little number. Oh wondrous feat, it does this on only half the power input of the ARC-55.

Its 3500 channels will let it spread and breathe easy at a time when the airwaves are getting a little more than crowded. That versatility alone will insure the set's being around for a long time.

What's more, the ARC-51 has 18 preset channels, compared to only 12 for the ARC-45, which it also will replace. And, unlike the ARC-45 and the ARC-60—the third set it'll replace—the new set is completely self-contained and doesn't need crystals.




The things the ARC-51 can do that the -45 and -60 can't are almost embarrassing. Like, it can raise many, many channels that the other two can't. It has 10 times the power output of the ARC-45 and many times that of the ARC-60. You can get a lot of towers with the new job.



C-4677

SPREAD YOUR WINGS, AIR TYPES

COMMUNICATIONS

# YOUR BIRDY'S GOT A BIG MOUTH NOW

Some one of these baby blue days, when supply meets demand, your not-too-talkative bird is gonna become a chatterbox.

What's more, it'll be talkin' in three languages—Army, Navy-Marine and Air Force. Oh happy, happy day! And the words won't sound like they're comin' thru a mouthful of marbles.

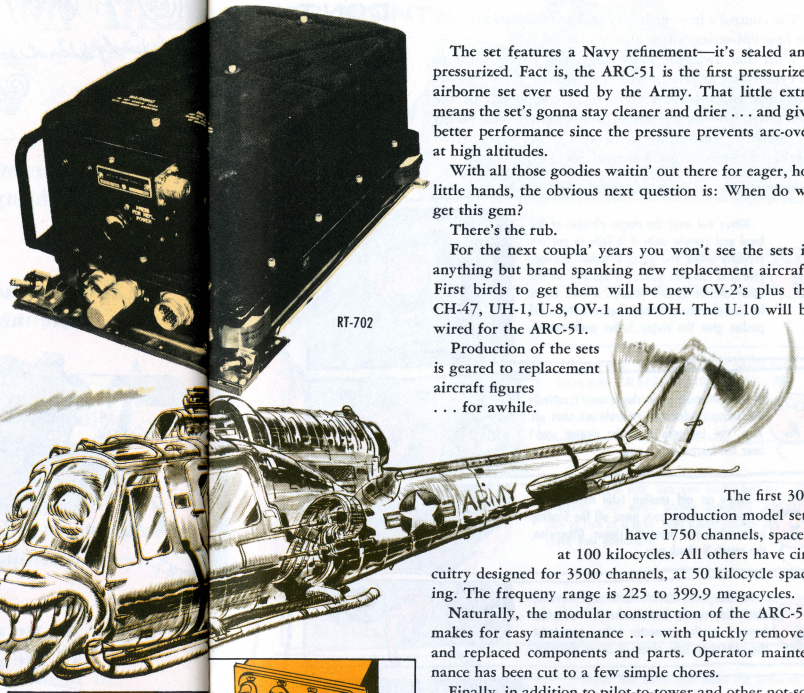
What's gonna cause all this ever-lovin' twitchin'?

The new AN/ARC-51 radio set—what else! The Army's 3500-channel set will be called the AN/ARC-51BX, and the early, 1750-channel model will be the AN/ARC-51X.

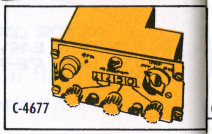
The ARC-51 comes with half the weight and size of the 65-pound ARC-55, which it replaces. It has twice the power output, which makes it a mighty hot little number. Oh wondrous feat, it does this on only half the power input of the ARC-55.

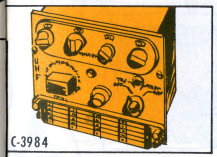
Its 3500 channels will let it spread and breathe easy at a time when the airwaves are getting a little more than crowded. That versatility alone will insure the set's being around for a long time.

What's more, the ARC-51 has 18 preset channels, compared to only 12 for the ARC-45, which it also will replace. And, unlike the ARC-45 and the ARC-60—the third set it'll replace—the new set is completely self-contained and doesn't need crystals.




The things the ARC-51 can do that the -45 and -60 can't are almost embarrassing. Like, it can raise many, many channels that the other two can't. It has 10 times the power output of the ARC-45 and many times that of the ARC-60. You can get a lot of towers with the new job.






The set features a Navy refinement—it's sealed and pressurized. Fact is, the ARC-51 is the first pressurized airborne set ever used by the Army. That little extra means the set's gonna stay cleaner and drier . . . and give better performance since the pressure prevents arc-over at high altitudes.

With all those goodies waitin' out there for eager, hot little hands, the obvious next question is: When do we get this gem?

There's the rub.

For the next coupla' years you won't see the sets in anything but brand spanking new replacement aircraft. First birds to get them will be new CV-2's plus the CH-47, UH-1, U-8, OV-1 and LOH. The U-10 will be wired for the ARC-51.

Production of the sets is geared to replacement aircraft figures . . . for awhile.

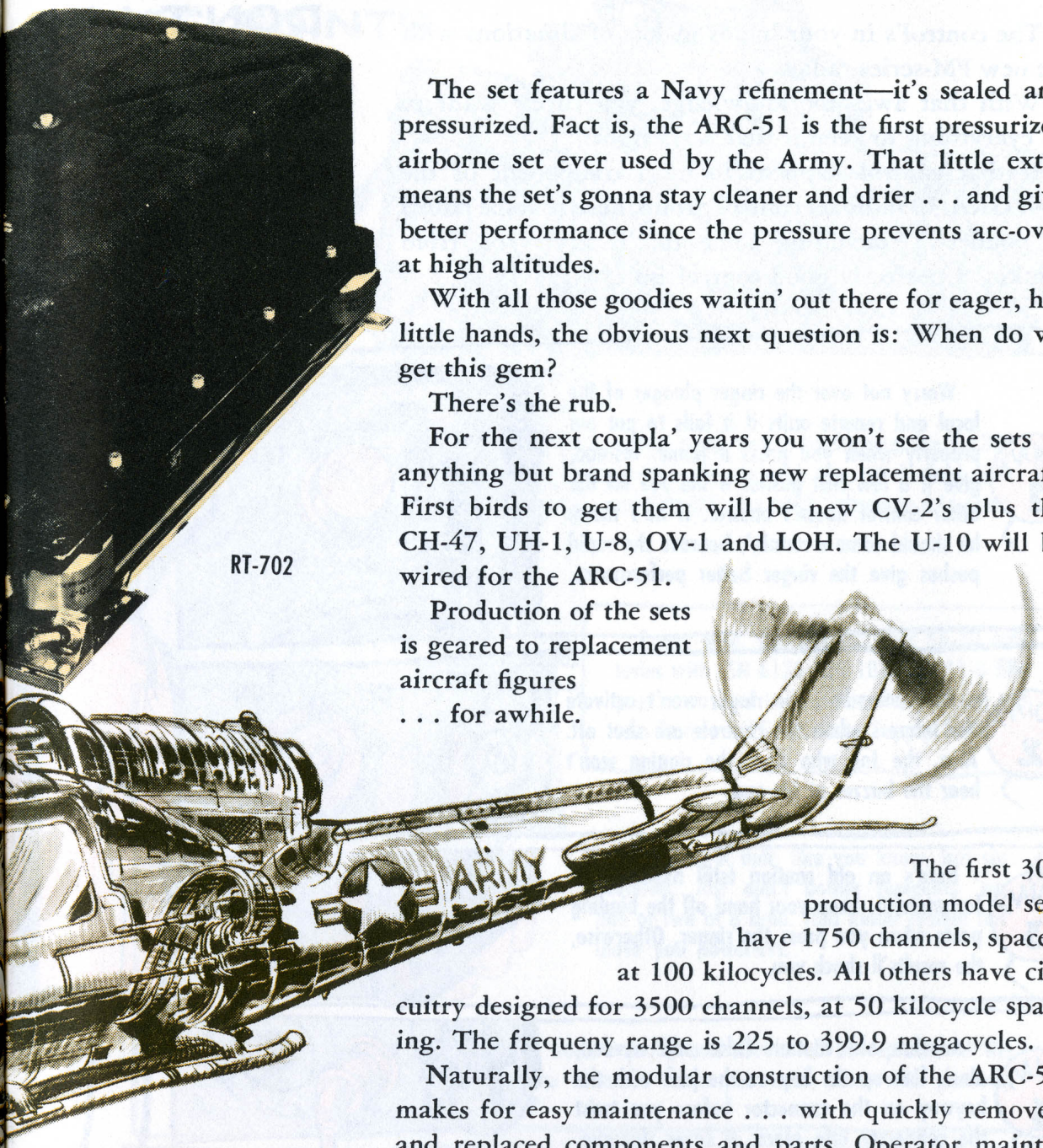
The first 300 production model sets have 1750 channels, spaced at 100 kilocycles. All others have circuitry designed for 3500 channels, at 50 kilocycle spacing. The frequeny range is 225 to 399.9 megacycles.

Naturally, the modular construction of the ARC-51 makes for easy maintenance . . . with quickly removed and replaced components and parts. Operator maintenance has been cut to a few simple chores.

Finally, in addition to pilot-to-tower and other not-so-routine talk, the ARC-51 can net with ground-to-air UHF sets such as the AN/VRC-24 and AN/TRC-68—which adds a tactical utility.

Pubs you need for the new set include TM 11-5820-518-12 and TM 11-5820-518-20P.

# GOT A BIG MOUTH NOW



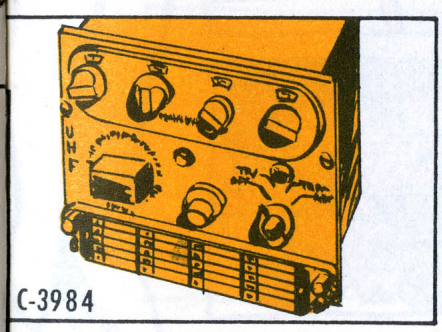

The set features a Navy refinement—it's sealed and pressurized. Fact is, the ARC-51 is the first pressurized airborne set ever used by the Army. That little extra means the set's gonna stay cleaner and drier . . . and give better performance since the pressure prevents arc-over at high altitudes.

With all those goodies waitin' out there for eager, hot little hands, the obvious next question is: When do we get this gem?

There's the rub.

For the next coupla' years you won't see the sets in anything but brand spanking new replacement aircraft. First birds to get them will be new CV-2's plus the CH-47, UH-1, U-8, OV-1 and LOH. The U-10 will be wired for the ARC-51.

Production of the sets is geared to replacement aircraft figures . . . for awhile.




The first 300 production model sets have 1750 channels, spaced at 100 kilocycles. All others have circuitry designed for 3500 channels, at 50 kilocycle spacing. The frequeny range is 225 to 399.9 megacycles.

Naturally, the modular construction of the ARC-51 makes for easy maintenance . . . with quickly removed and replaced components and parts. Operator maintenance has been cut to a few simple chores.

Finally, in addition to pilot-to-tower and other not-so-routine talk, the ARC-51 can net with ground-to-air UHF sets such as the AN/VRC-24 and AN/TRC-68—which adds a tactical utility.

Pubs you need for the new set include TM 11-5820-518-12 and TM 11-5820-518-20P.

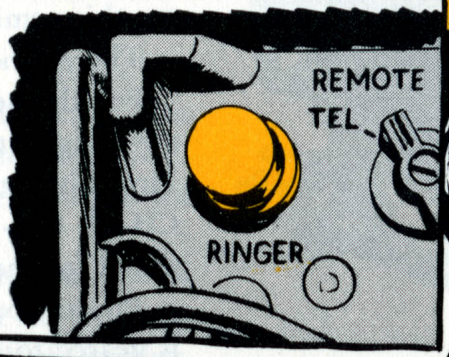
## WANT CONTROL OF THE SITUATION?

# DON'T LET GET AWAY

The control's in your hands in lots of situations with the new FM-series radios.

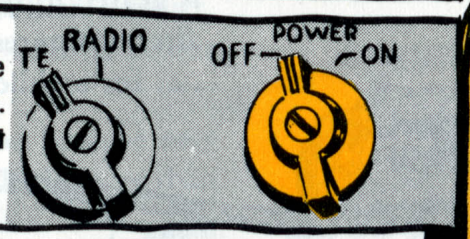
With that awesome knowledge, you surely want to do everything to keep it that way, right?

If that control happens to be a component of the AN/GRA-39 radio set control group, here're some points to ponder . . . including some that'll keep you from thinkin' a perfectly good control isn't.



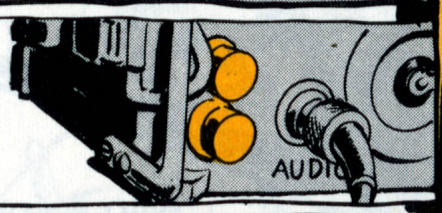

**POINT 1**

Worry not over the ringer plunger of the local and remote units if it fails to put out properly when you press it home. Instead, give it a few fast pushes if the Joe on the other control doesn't answer. If he's there, he should come a-runnin', because the rapid pushes give the ringer better performance.




**POINT 2**

But remember: the ringer won't activate the buzzers when the controls are shut off. Also, the Joe who does the ringing won't hear the buzzer at his end.

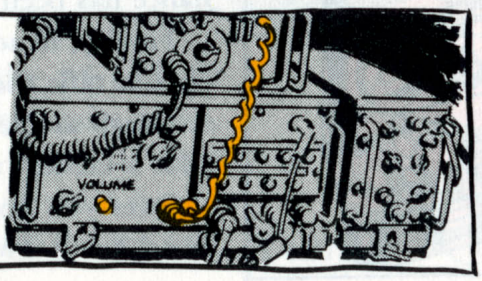


**POINT 3**

Here's an old caution (still needed, unfortunately): keep your hand off the binding posts when you press the ringer. Otherwise, the results'll shock you.

**POINT 4**

Another old caution (also still needed, alas): line up the key on the jack with the keyway on the connector before you twist the connector into place. It saves damage.




**POINT 5**

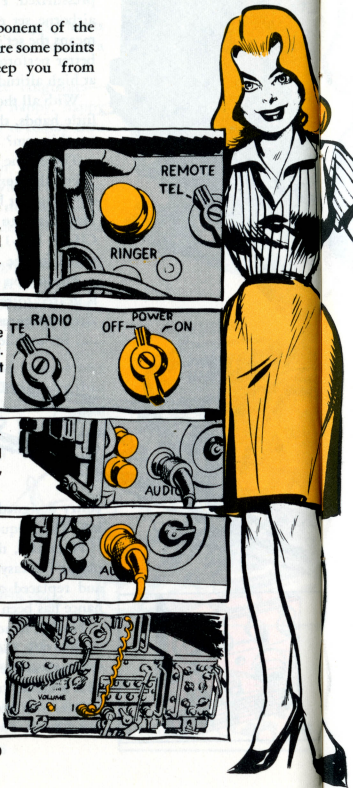
When you connect the C-2329 local unit to the receiver-transmitter, turn the radio's volume control no further than mid-point. You gotta be careful about that noise level because too much volume can key the RT.

# DON'T LET GET AWAY THESE POINTS FROM YOU

The control's in your hands in lots of situations with the new FM-series radios.

With that awesome knowledge, you surely want to do everything to keep it that way, right?

If that control happens to be a component of the AN/GRA-39 radio set control group, here're some points to ponder . . . including some that'll keep you from thinkin' a perfectly good control isn't.



**POINT 1** Worry not over the ringer plunger of the local and remote units if it fails to put out properly when you press it home. Instead, give it a few fast pushes if the Joe on the other control doesn't answer. If he's there, he should come a-runnin', because the rapid pushes give the ringer better performance.




**POINT 2** But remember: the ringer won't activate the buzzers when the controls are shut off. Also, the Joe who does the ringing won't hear the buzzer at his end.




**POINT 3** Here's an old caution (still needed, unfortunately): keep your hand off the binding posts when you press the ringer. Otherwise, the results'll shock you.



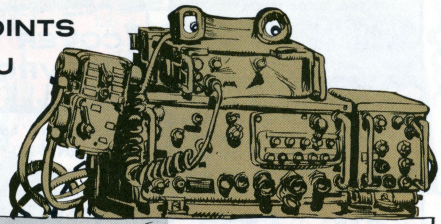
**POINT 4** Another old caution (also still needed, alas): line up the key on the jack with the keyway on the connector before you twist the connector into place. It saves damage.

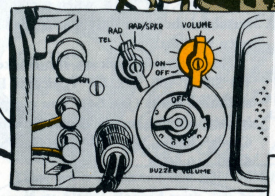


**POINT 5** When you connect the C-2329 local unit to the receiver-transmitter, turn the radio's volume control no further than mid-point. You gotta be careful about that noise level because too much volume can key the RT.



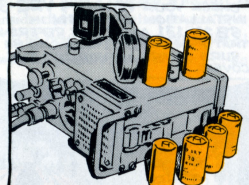





**POINT 6** Also, when you're hooking up the C-2328 remote unit, connect the WD-1 field wire and then turn the unit's volume to mid-point.

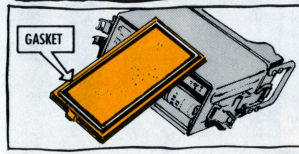
**POINT 7** Power-wise, you can get your BA-30 batteries with FSN 6135-120-1020. SB 11-6 fills you in on how to get 'em. Or, you can get 'em from your Self Service Supply Center.



**POINT 8** Each control unit, like you know, has six batteries. Just don't bother replacing 'em one or two at a time. That kinda system can leave you powerless.

The series-connected batteries wear down equally and should all be replaced at the same time. You put a strain on new batteries when you work them with partially discharged ones.

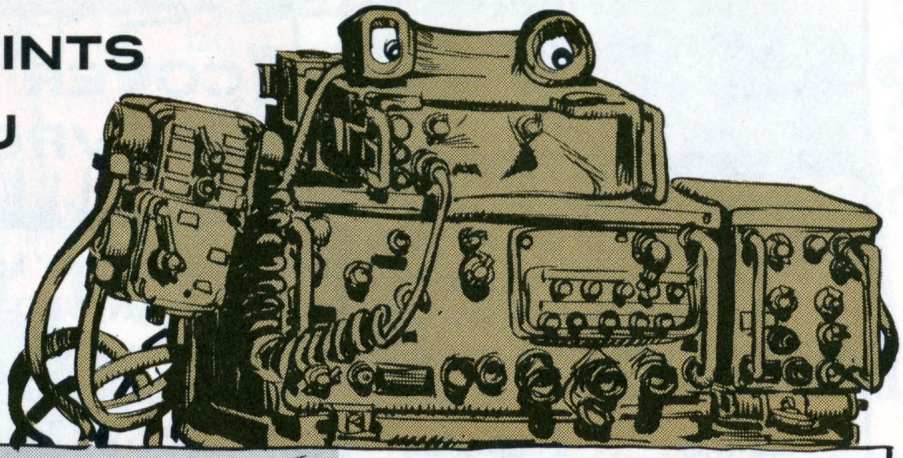
**POINT 9** About that cover that hides the batteries: Make sure its rubber gasket seats right when you re-snap the cover on the rear of the control units. That way you head off damage to the gasket and keep moisture from the unit.

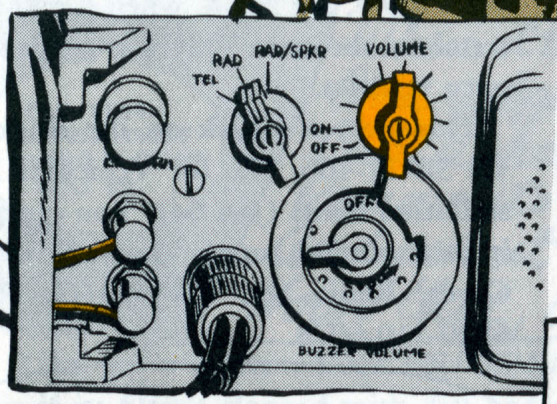





TURN PAGE FOR MORE

# THESE POINTS FROM YOU



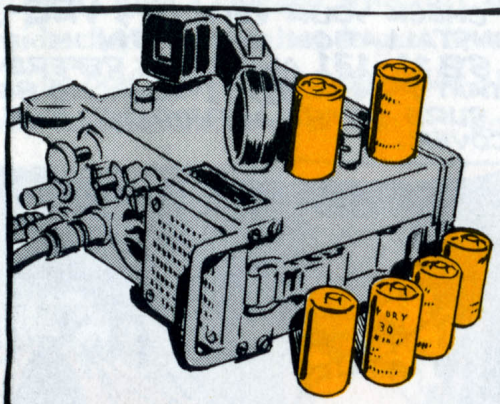



Also, when you're hooking up the C-2328 remote unit, connect the WD-1 field wire and then turn the unit's volume to mid-point.

POINT 6

Power-wise, you can get your BA-30 batteries with FSN 6135-120-1020. SB 11-6 fills you in on how to get 'em. Or, you can get 'em from your Self Service Supply Center.

POINT 7

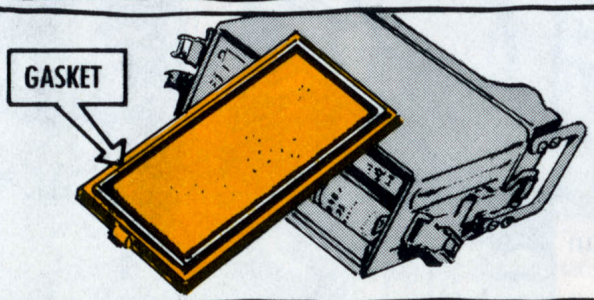


Each control unit, like you know, has six batteries. Just don't bother replacing 'em one or two at a time. That kinda system can leave you powerless.

POINT 8

The series-connected batteries wear down equally and should all be replaced at the same time. You put a strain on new batteries when you work them with partially discharged ones.

POINT 9



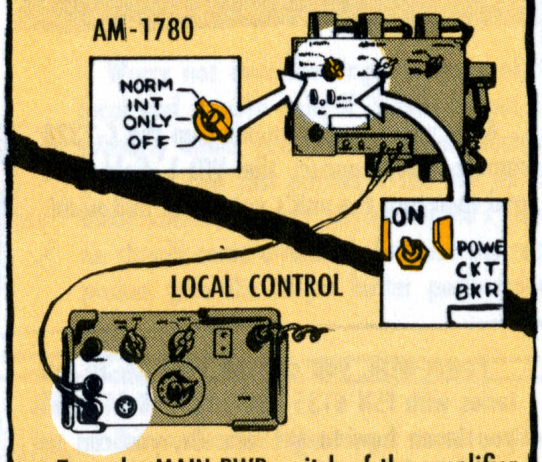

About that cover that hides the batteries: Make sure its rubber gasket seats right when you re-snap the cover on the rear of the control units. That way you head off damage to the gasket and keep moisture from the unit.



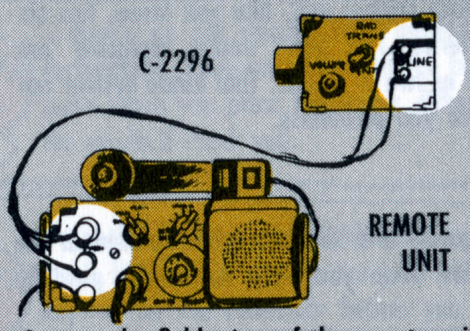
P.S MORE

For you armor types with the AN/VRC-12 series radio sets, the following rig'll give you an interphone hook-up:

Connect the local control radio cable to the RETRANSMIT R/W MIKE receptacle on the front panel of your vehicle's receiver-transmitter. Then, connect the WD-1 wires of the local unit to the line binding posts of the AM-1780 amplifier.




Turn the MAIN PWR switch of the amplifier to NORM . . . and the circuit breaker switch to ON.




Connect the field wires of the remote unit to the C-2296 external interphone control box. The driver's C-2297 control box must be in the EXT position.

Work the H-138 P-T-T switch as per usual. Push . . . talk. Release . . . listen.

Those points should keep you in control of the situation.

END

# COVER FOR A VRQ-3

Been wonderin' how to get the cover for your AN/VRQ-3 radio set?

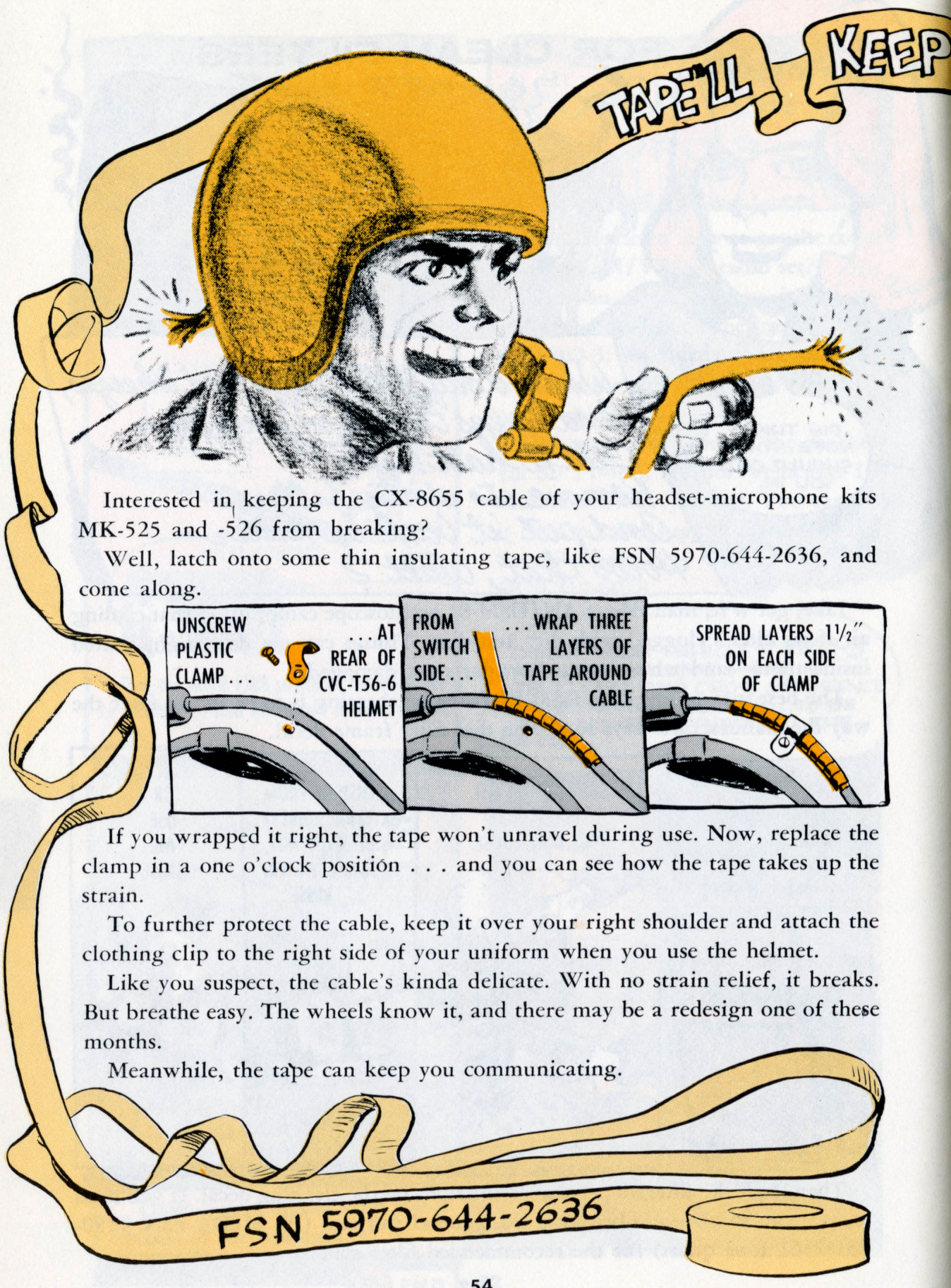
Like you already know, it was deleted from the Basic Issue Items List for the VRQ-3, Sig 7 & 8, when it was determined the cover only was needed in open vehicles.

However, it's back on the market, via SB 11-466, IPL for Vehicular Installation Units (Jan 64). You can get it thru normal supply channels with: Cover, Radio Set, CW-329/G, FSN 5820-219-6078.

Like, get w'it, man. Your AN/USM-81 oscilloscope can't pull in that cooling air if its filter's clogged with dirt and dust. Things can get downright heated inside there—and when it gets hot, parts get damaged.

The best way to keep the USM-81 from overheating is to clean the filter the way the manufacturer says to . . . on that filter frame decal.

Then, coat the filter as per the instructions on the cleaning decal. If you need to, you can substitute lubricating oil, general purpose (PL MED), FSN 9150-231-2361 (one quart) for the recommended filter coater.




Interested in keeping the CX-8655 cable of your headset-microphone kits MK-525 and -526 from breaking?

Well, latch onto some thin insulating tape, like FSN 5970-644-2636, and come along.

If you wrapped it right, the tape won't unravel during use. Now, replace the clamp in a one o'clock position . . . and you can see how the tape takes up the strain.

To further protect the cable, keep it over your right shoulder and attach the clothing clip to the right side of your uniform when you use the helmet.

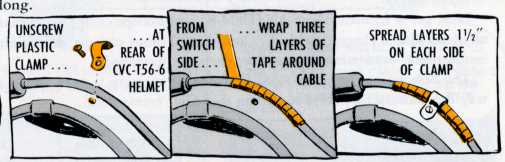
Like you suspect, the cable's kinda delicate. With no strain relief, it breaks. But breathe easy. The wheels know it, and there may be a redesign one of these months.

Meanwhile, the tape can keep you communicating.

# TAPE'LL KEEP YOU TALKING

Interested in keeping the CX-8655 cable of your headset-microphone kits MK-525 and -526 from breaking?

Well, latch onto some thin insulating tape, like FSN 5970-644-2636, and come along.




If you wrapped it right, the tape won't unravel during use. Now, replace the clamp in a one o'clock position . . . and you can see how the tape takes up the strain.

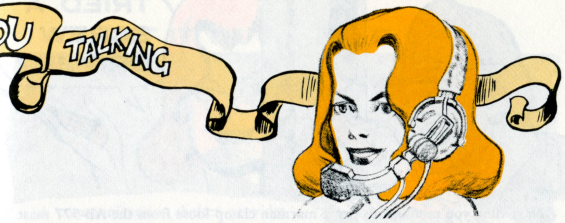
To further protect the cable, keep it over your right shoulder and attach the clothing clip to the right side of your uniform when you use the helmet.

Like you suspect, the cable's kinda delicate. With no strain relief, it breaks. But breathe easy. The wheels know it, and there may be a redesign one of these months.

Meanwhile, the tape can keep you communicating.

FSN 5970-644-2636





You still getting words thru your H-161/U headset microphone?

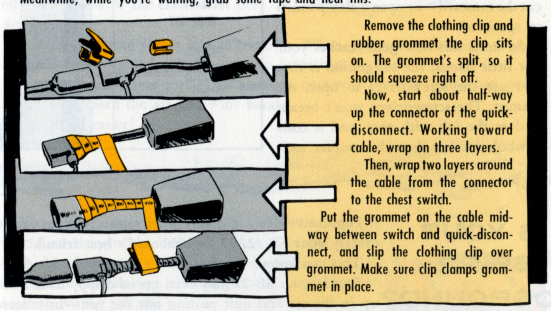
Good. Stick around whilst you get the word on how to continue that good fortune.

Like you know, "delicate" is the kindest way to describe the headset's cable which connects the chest switch to the quick-disconnect. Snap, crack & poppo! is wot it's likely to do after a little use.

Maybe "delicate" ain't exactly the word you have in mind, but you can work up a warmer feelin' toward that cable with a simple fix that'll let the juice get thru it a lot longer.

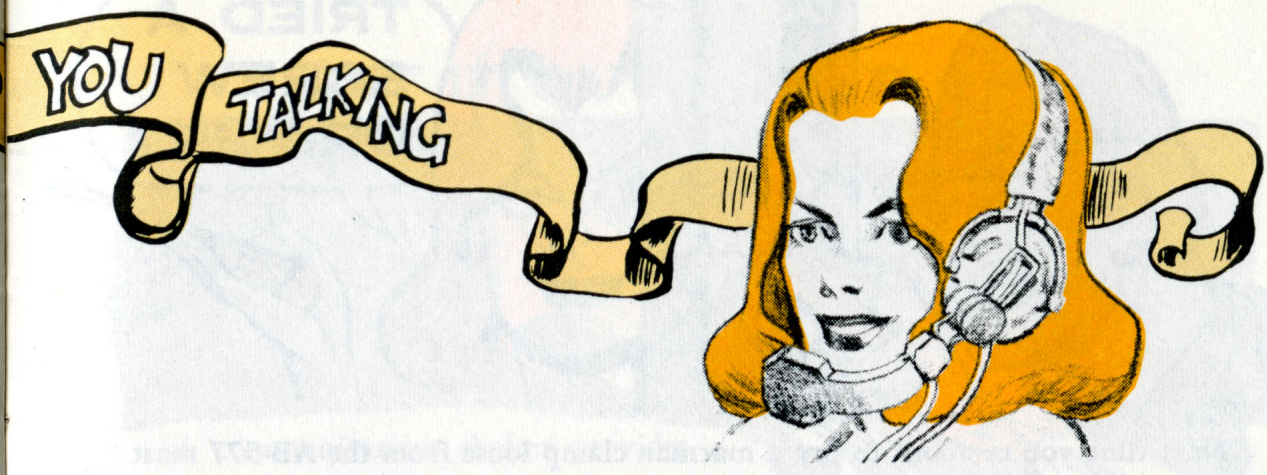
Might even keep the cable goin' until a better one comes your way . . . no foolin'. Like, the people upstairs know it's breakin', and that it's inadequate—so they're doing something about it.

Meanwhile, while you're waiting, grab some tape and hear this:




For added protection, use the neck strap and clothing clip when you wear the H-161/U.

Now go easy on the taped cable until you get a new one.




You still getting words thru your H-161/U headset microphone?

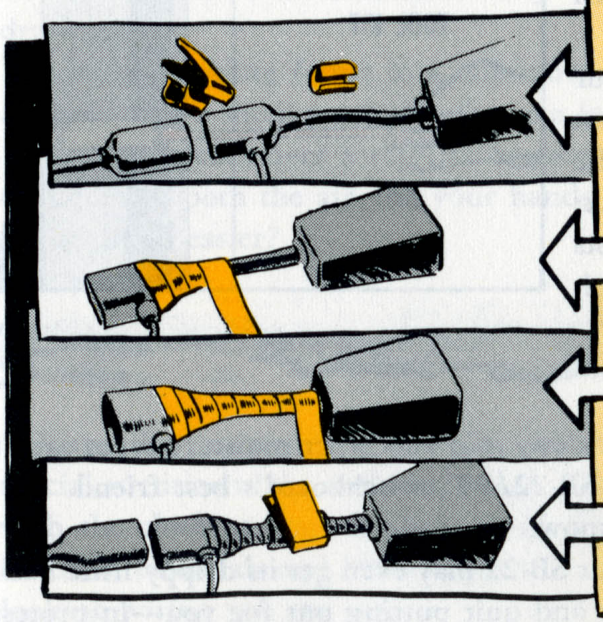
Good. Stick around whilst you get the word on how to continue that good fortune.

Like you know, "delicate" is the kindest way to describe the headset's cable which connects the chest switch to the quick-disconnect. Snap, crack & poppo! is wot it's likely to do after a little use.

Maybe "delicate" ain't exactly the word you have in mind, but you can work up a warmer feelin' toward that cable with a simple fix that'll let the juice get thru it a lot longer.

Might even keep the cable goin' until a better one comes your way . . . no foolin'. Like, the people upstairs know it's breakin', and that it's inadequate—so they're doing something about it.

**Meanwhile, while you're waiting, grab some tape and hear this:**



Remove the clothing clip and rubber grommet the clip sits on. The grommet's split, so it should squeeze right off.

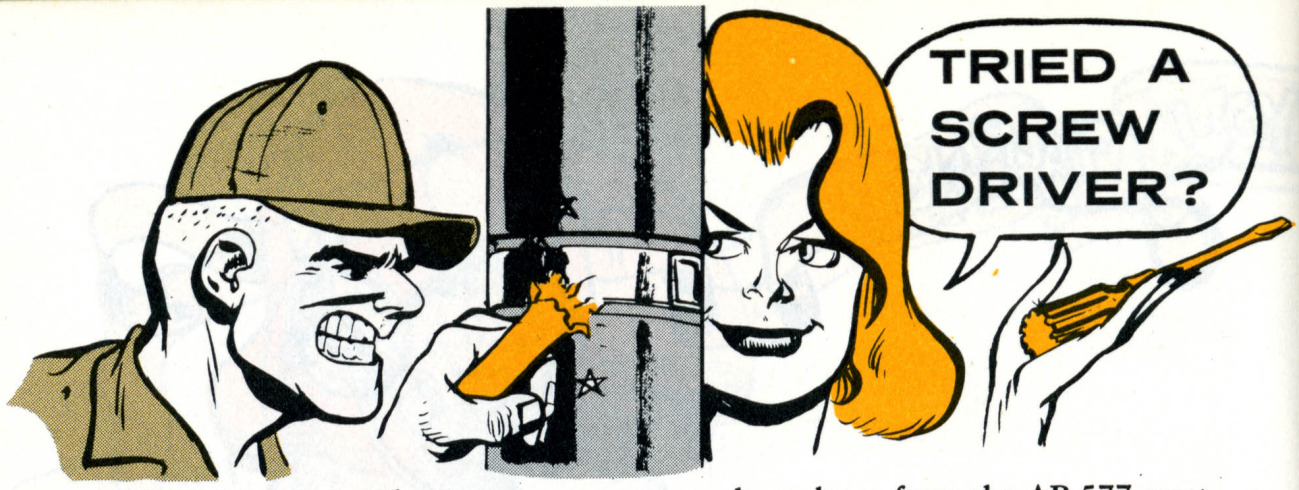
Now, start about half-way up the connector of the quick-disconnect. Working toward cable, wrap on three layers.

Then, wrap two layers around the cable from the connector to the chest switch.

Put the grommet on the cable mid-way between switch and quick-disconnect, and slip the clothing clip over grommet. Make sure clip clamps grommet in place.

For added protection, use the neck strap and clothing clip when you wear the H-161/U.

Now go easy on the taped cable until you get a new one.



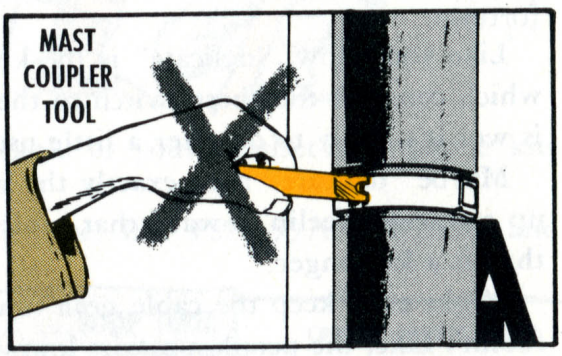

Next time you're about to pry a marman clamp loose from the AB-577 mast of the AN/GRC-50 radio set, try a screwdriver.

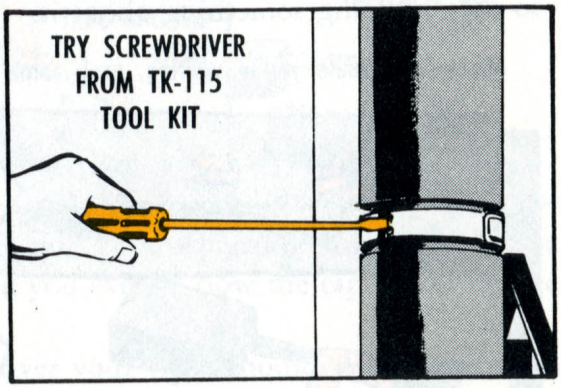
Specifically, try screwdriver, FSN 5120-222-8852, which is in your TK-115 tool kit.

You may have learned by this time that the mast coupler tool attached to the AB-577 by nylon cord is just a little better than your fingernail for prying open the clamp. Besides, you probably broke the ends of the tool off long before now.

Which explains why the wheels are designing a better tool to replace the original one. The old one just couldn't cut the mustard—or open a clamp much to speak of.

So until this new gem reaches your hot little hands, the suggestion is that you use the screwdriver to open the clamps. The screwdriver won't break; it does the job with ease, and it costs a whole lot less than the coupler tool.



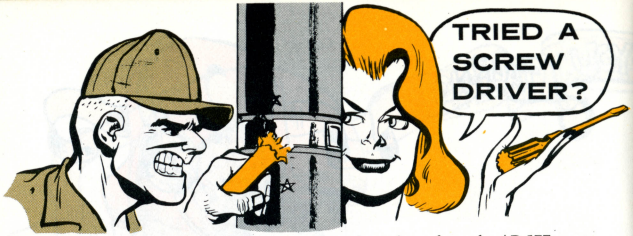

## IS YOUR SB-22 FOGBOUND?

Fog, heavy dew, rain and other moisture types aren't exactly your SB-22/PT switchboard's best friend.

This you know.

Fact is, your SB-22 may even get its drippy little back up in the air and quit putting out for you—in protest over that fog or dew.

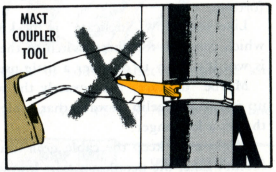
That's when it's time for you to humor it, dryly. Like, with a clean, lint-free cloth.




Next time you're about to pry a marman clamp loose from the AB-577 mast of the AN/GRC-50 radio set, try a screwdriver.

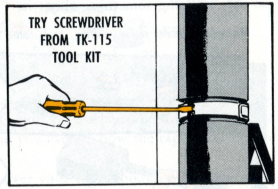
Specifically, try screwdriver, FSN 5120-222-8852, which is in your TK-115 tool kit.

You may have learned by this time that the mast coupler tool attached to the AB-577 by nylon cord is just a little better than your fingernail for prying open the clamp. Besides, you probably broke the ends of the tool off long before now.




Which explains why the wheels are designing a better tool to replace the original one. The old one just couldn't cut the mustard—or open a clamp much to speak of.

So until this new gem reaches your hot little hands, the suggestion is that you use the screwdriver to open the clamps. The screwdriver won't break; it does the job with ease, and it costs a whole lot less than the coupler tool.




## IS YOUR SB-22 FOGBOUND?

Fog, heavy dew, rain and other moisture types aren't exactly your SB-22/PT switchboard's best friend.

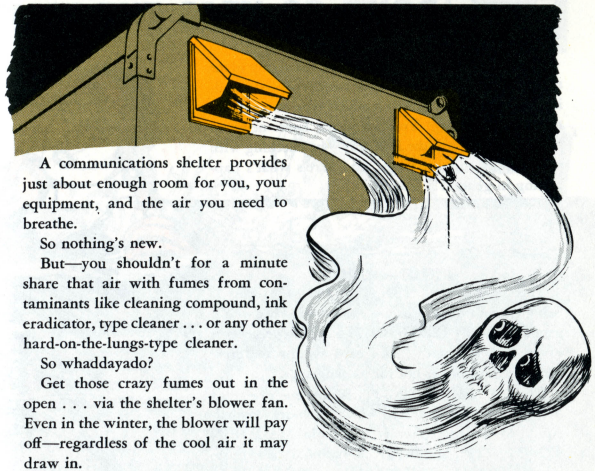
This you know.

Fact is, your SB-22 may even get its drippy little back up in the air and quit putting out for you—in protest over that fog or dew.

That's when it's time for you to humor it, dryly. Like, with a clean, lint-free cloth.



## GET IT OUT IN THE OPEN



A communications shelter provides just about enough room for you, your equipment, and the air you need to breathe.

So nothing's new.

But—you shouldn't for a minute share that air with fumes from contaminants like cleaning compound, ink eradicator, type cleaner . . . or any other hard-on-the-lungs-type cleaner.

So whaddayado?

Get those crazy fumes out in the open . . . via the shelter's blower fan. Even in the winter, the blower will pay off—regardless of the cool air it may draw in.

A tip on holding fumes to a minimum: When you use a cleaning solvent, apply it with a small patch. Don't use a large rag.

Solvent spreads over a rag like kerosene on a wick. Fumes from a big spread contaminate both the air and your hands.

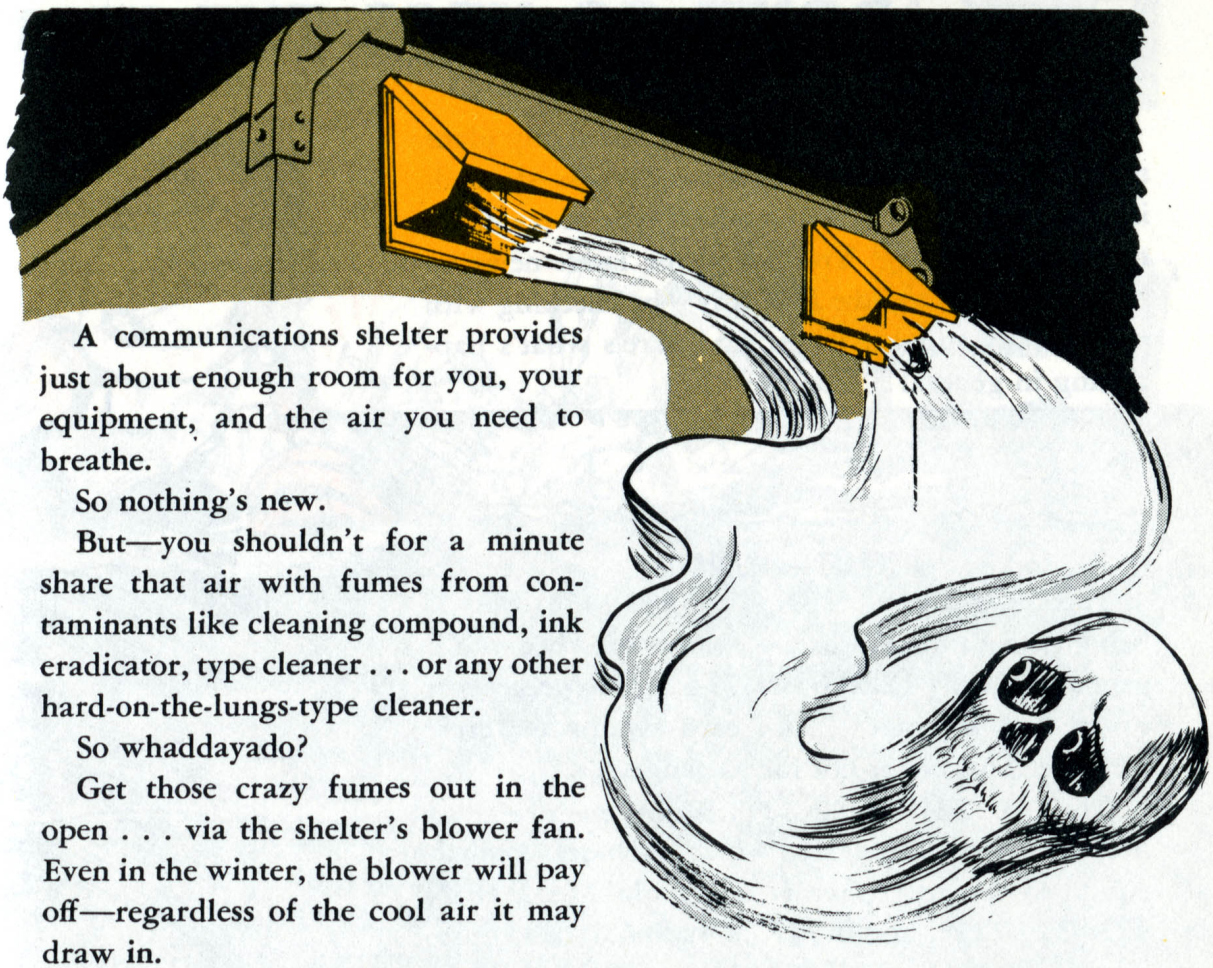
Breathing easier?

Wipe the exposed wiring with said cloth, and pay special attention to the cords and plugs. Also take a swipe with the cloth at your headset, pack, line packs, connections, terminals and binding posts . . . and any wet-looking wiring you can see.

And, if moisture put you out of business, the dry cloth —at this point—should've put you back in.

It's a "no sweat" job that takes only a coupla' minutes.

# GET IT OUT IN THE OPEN



A communications shelter provides just about enough room for you, your equipment, and the air you need to breathe.

So nothing's new.

But—you shouldn't for a minute share that air with fumes from contaminants like cleaning compound, ink eradicator, type cleaner . . . or any other hard-on-the-lungs-type cleaner.

So whaddayado?

Get those crazy fumes out in the open . . . via the shelter's blower fan. Even in the winter, the blower will pay off—regardless of the cool air it may draw in.

A tip on holding fumes to a minimum: When you use a cleaning solvent, apply it with a small patch. Don't use a large rag.

Solvent spreads over a rag like kerosene on a wick. Fumes from a big spread contaminate both the air and your hands.

Breathing easier?

Wipe the exposed wiring with said cloth, and pay special attention to the cords and plugs. Also take a swipe with the cloth at your headset, pack, line packs, connections, terminals and binding posts . . . and any wet-looking wiring you can see.

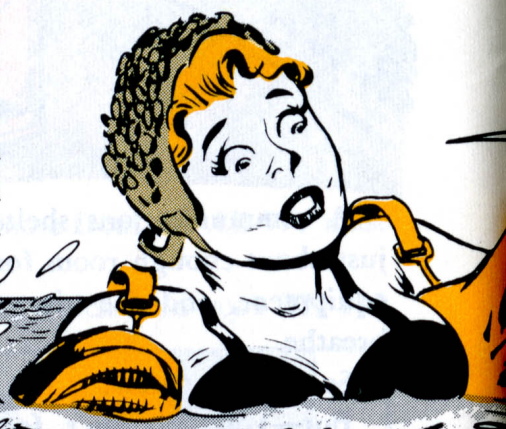
And, if moisture put you out of business, the dry cloth —at this point—should've put you back in.

It's a "no sweat" job that takes only a coupla' minutes.

THE LIFE PRESERVER STORY OR . . .

# DON'T GO NEAR THE WATER

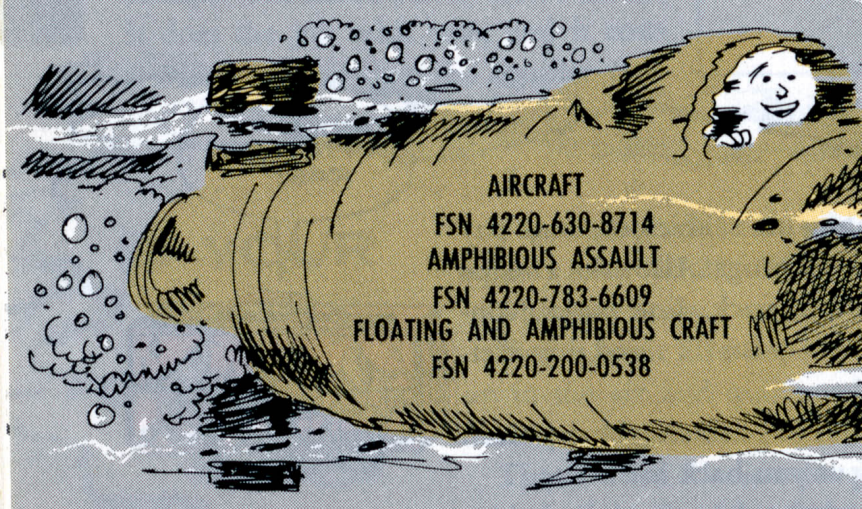
When it comes to life preservers, the Army plans to narrow things down to three basic types—depending on what your job is and which type of transportation you're using. You'll find the latest news on how to stay afloat—the FSN way—by checking with your supply support types. And here's what's happening in general . . . supplywise.



## AIRCRAFT—UNDERARM

The old Mark II (FSN 4220-630-1463) vest is being issued until stocks are exhausted. Then you'll get the new **FSN 4220-630-8714 . . . life preserver, underarm, aircraft** . . . for each aviator and crew member. This one is not for passengers.

The B-7 (TM 1-14S2-2-11) is now the preferred preserver for passengers, which includes combat-equipped troops. It replaces the old MA-2 (FSN 4220-329-7258) and B-5 (FSN 4220-620-6143) preservers, both of which are obsolete and should be turned in ASAP. Ask for **FSN 4220-657-2197 . . . life preserver, underarm, parachutist, gas or oral inflation, B-7** . . . on a one per passenger seat basis.



AIRCRAFT
FSN 4220-630-8714
AMPHIBIOUS ASSAULT
FSN 4220-783-6609
FLOATING AND AMPHIBIOUS CRAFT
FSN 4220-200-0538

GENERAL AND SUPPLY

THE LIFE PRESERVER STORY OR . . .

# DON'T GO NEAR THE WATER WITHOUT THESE FSN'S

When it comes to life preservers, the Army plans to narrow things down to three basic types—depending on what your job is and which type of transportation you're using. You'll find the latest news on how to stay afloat—the FSN way—by checking with your supply support types. And here's what's happening in general . . . supplywise.

## AIRCRAFT—UNDERARM

The old Mark II (FSN 4220-630-1463) vest is being issued until stocks are exhausted. Then you'll get the new **FSN 4220-630-8714 . . . life preserver, underarm, aircraft** . . . for each aviator and crew member. This one is not for passengers.

The B-7 (TM 1-14S2-2-11) is now the preferred preserver for passengers, which includes combat-equipped troops. It replaces the old MA-2 (FSN 4220-329-7258) and B-5 (FSN 4220-620-6143) preservers, both of which are obsolete and should be turned in ASAP. Ask for **FSN 4220-657-2197 . . . life preserver, underarm, parachutist, gas or oral inflation, B-7** . . . on a one per passenger seat basis.

## AMPHIBIOUS ASSAULT—YOKE

Anybody assigned to or expected to be transported in amphibious personnel and weapons carriers—or inflated assault and recon boats—should eventually have **FSN 4220-783-6609 . . . life preserver, yoke, oral inflation, trapped air, adult, 26½ inches high.** Order one for each crewman and passenger. There's no problem wearing this yoke type with full combat gear.

This preserver replaces the old (FSN 4220-542-5717) yoke-type preserver with the gas cylinder, which can still be used until stocks run out.

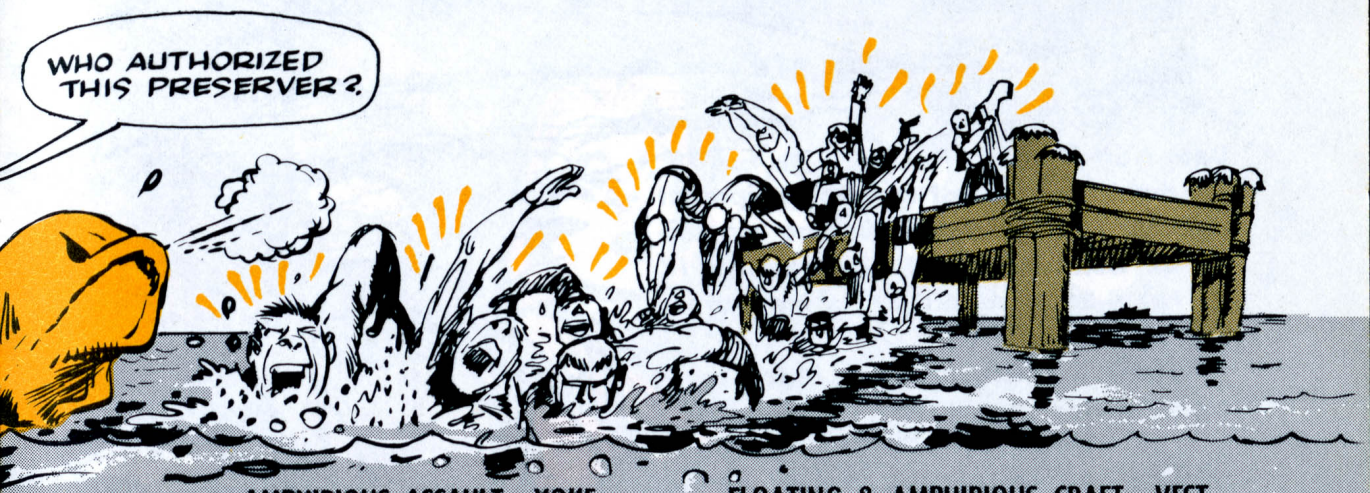
## FLOATING & AMPHIBIOUS CRAFT—VEST

**Life preserver, vest, fibrous glass filled, adult size, 24 inches high . . . FSN 4220-200-0538** . . . has two different types of issue, depending on the type of craft. So you order one per crewman for a BARC, LARC or DUKW. But, for all other craft, you can ask for one per crewman and passenger capacity of the vessel. The vest type can **not** be worn with a full combat pack.

This one replaces FSN's
4220-250-6283
(this yoke type should not be used on board ocean-going vessels)
4220-250-6284
4220-287-3359
4220-702-2257
. . . after their stocks are used up.

That's all she wrote . . . keep afloat.

# WITHOUT THESE FSN'S




## AMPHIBIOUS ASSAULT—YOKE

Anybody assigned to or expected to be transported in amphibious personnel and weapons carriers—or inflated assault and recon boats—should eventually have **FSN 4220-783-6609 . . . life preserver, yoke, oral inflation, trapped air, adult, 26½ inches high.** Order one for each crewman and passenger. There's no problem wearing this yoke type with full combat gear.

This preserver replaces the old (FSN 4220-542-5717) yoke-type preserver with the gas cylinder, which can still be used until stocks run out.

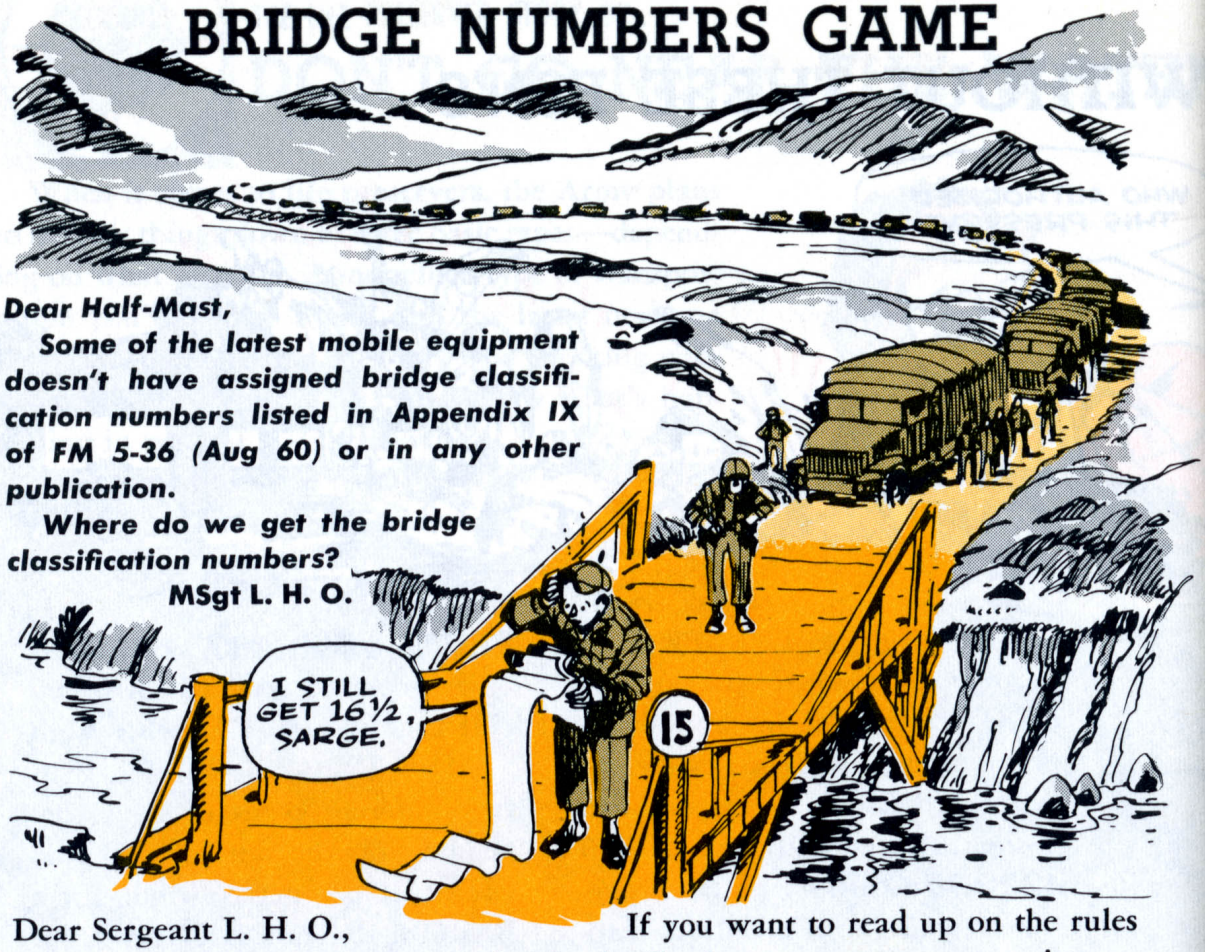
## FLOATING & AMPHIBIOUS CRAFT—VEST

**Life preserver, vest, fibrous glass filled, adult size, 24 inches high . . . FSN 4220-200-0538** . . . has two different types of issue, depending on the type of craft. So you order one per crewman for a BARC, LARC or DUKW. But, for all other craft, you can ask for one per crewman and passenger capacity of the vessel. The vest type can **not** be worn with a full combat pack.

This one replaces FSN's
4220-250-6283
(this yoke type should not be used on board ocean-going vessels)
4220-250-6284
4220-287-3359
4220-702-2257
. . . after their stocks are used up.

That's all she wrote . . . keep afloat.

# BRIDGE NUMBERS GAME




***Dear Half-Mast,***

***Some of the latest mobile equipment doesn't have assigned bridge classification numbers listed in Appendix IX of FM 5-36 (Aug 60) or in any other publication.***

***Where do we get the bridge classification numbers?***

**MSgt L. H. O.**

Dear Sergeant L. H. O.,

Sometimes those numbers are as hard to come by as a winning number at a horse race. But you don't need to be a numerologist or resort to astrology or the ouija board.

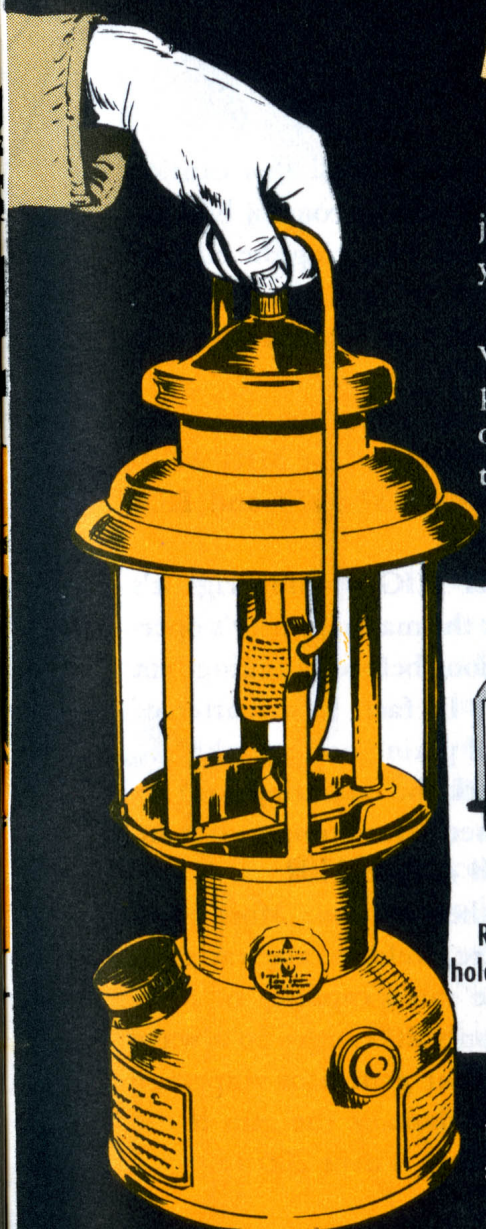
Until your equipment gets an official bridge classification number, you can assign one by comparing the equipment with a similar item that is listed in FM 5-36.

Naturally, you want to compare both weight and wheel-base dimensions. And you also need to consider the number of axles carrying the weight and any towed equipment.

Except in an emergency, it's best to pass this problem along to the Engineers who are responsible for weight classifications.

If you want to read up on the rules the Engineers use, get your mitts on Chap 3, Sect V of FM 5-36 and Chap 5, Sect II of TM 5-312 (7 Jun 62). (This TM supersedes TM 5-260 mentioned in FM 5-36.)

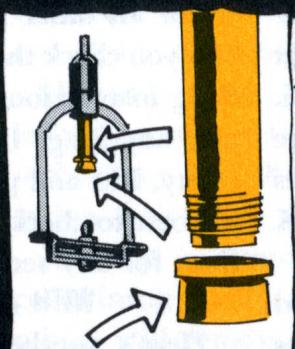
# WHEN YOU'RE IN THE DARK . . .



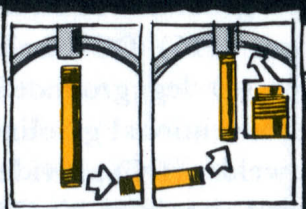
. . . And your gasoline lantern (FSN 6260-170-0430) just won't give with the light, maybe there's something you can do to help the situation.

Some of the burner assemblies (FSN 6260-284-2554) weren't put together right. You might say the 2⅛-in pipe nipple was installed backwards. The wrong end of the pipe nipple was put into the generator block and the air can't get thru the block.

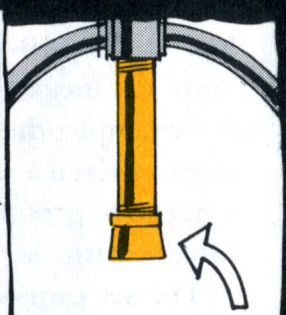
The remedy is simple.



Remove the mantle holder from the nipple.



Then take the nipple out of the generator block and reverse it. That means you'll put the end that has the ¼ inch of threads and a shoulder into the generator block.



Next replace the mantle holder and put the lantern back together.

Remember, the mantle needs special care. It's not made to take rough handling—in fact, it should be handled as gently as an egg.

# BE SURE OF YOUR GROUND

In case you missed the warning in the manufacturer's maintenance instructions . . . here's an important reminder on using the MIG (Metal Inert Gas) welding set (FSN 3431-837-5574, DA Contract No. 11-199-ORD-534).

You can use the set only on a 110-volt (or 115) AC circuit which does **not** have a ground on either leg.

Or, you can use it on a 110-volt (or 115) DC circuit not grounded on either leg. Or, a 110-volt (115) DC circuit with the negative (–) leg grounded. For example, the conventional gasoline engine driven arc welder (DC) provides a negative grounded circuit, so it's OK for use with the MIG set.

The set cannot be used on standard 115-volt AC circuits 'cause such lines could have a grounded leg. Actually, the best rule to follow here is—**NEVER** plug the set into any AC line . . . unless, of course, local SOP has cleared it with post engineers, or other power-line experts.

The big reason for all this caution is that the set's voltage control box has a built-in ground. Plugging the rig into the wrong type of circuit can cause a damaging short, and burn out the control's rectifier.

Other MIG sets which don't have the grounding problem are the MIG welding set FSN 3431-837-5573 and FSN 3431-879-9709.

For all other MIG welding rigs it's best you check the manufacturer's operating instructions before plugging 'em into anything. In fact, as a matter of safety, PM and plain good practice . . . it's best to check the operating instructions for any set before plugging it in.

### WITH A GENERATOR

Here's another caution: Most gasoline driven arc welders are rated at 300 amps, the rated capacity of MIG equipment is only 200 amps. So always double-check your generator amperage setting—you'll damage the gun if the generator's setting is over 200 amps.

# BE SURE OF YOUR GROUND

In case you missed the warning in the manufacturer's maintenance instructions . . . here's an important reminder on using the MIG (Metal Inert Gas) welding set (FSN 3431-837-5574, DA Contract No. 11-199-ORD-534).

You can use the set only on a 110-volt (or 115) AC circuit which does **not** have a ground on either leg.

Or, you can use it on a 110-volt (or 115) DC circuit not grounded on either leg. Or, a 110-volt (115) DC circuit with the negative (–) leg grounded. For example, the conventional gasoline engine driven arc welder (DC) provides a negative grounded circuit, so it's OK for use with the MIG set.

The set cannot be used on standard 115-volt AC circuits 'cause such lines could have a grounded leg. Actually, the best rule to follow here is—**NEVER** plug the set into any AC line . . . unless, of course, local SOP has cleared it with post engineers, or other power-line experts.

The big reason for all this caution is that the set's voltage control box has a built-in ground. Plugging the rig into the wrong type of circuit can cause a damaging short, and burn out the control's rectifier.

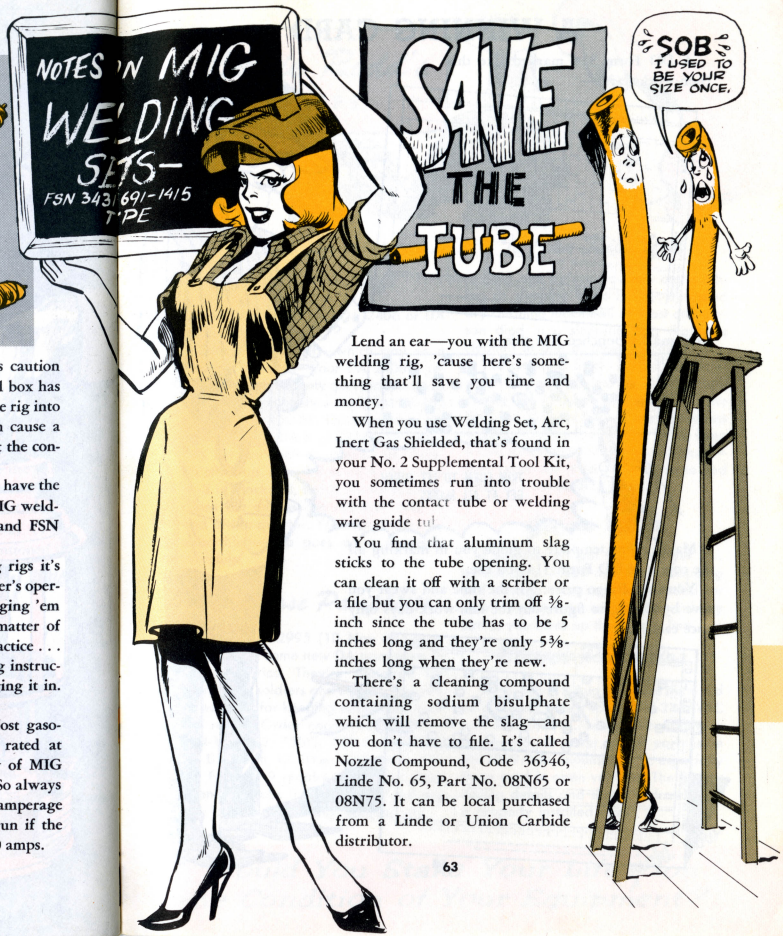
Other MIG sets which don't have the grounding problem are the MIG welding set FSN 3431-837-5573 and FSN 3431-879-9709.

For all other MIG welding rigs it's best you check the manufacturer's operating instructions before plugging 'em into anything. In fact, as a matter of safety, PM and plain good practice . . . it's best to check the operating instructions for any set before plugging it in.

### WITH A GENERATOR

Here's another caution: Most gasoline driven arc welders are rated at 300 amps, the rated capacity of MIG equipment is only 200 amps. So always double-check your generator amperage setting—you'll damage the gun if the generator's setting is over 200 amps.



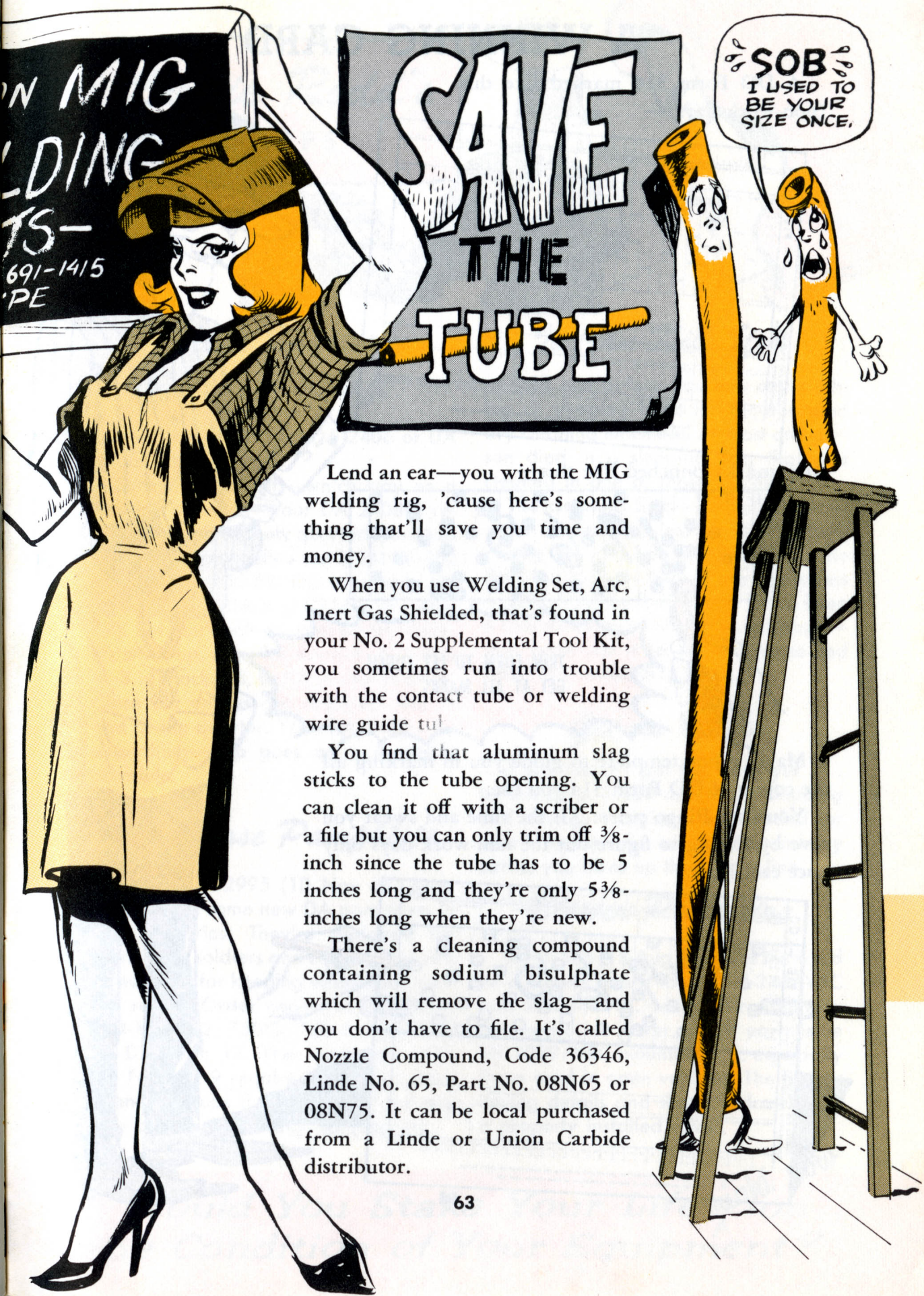



Lend an ear—you with the MIG welding rig, 'cause here's something that'll save you time and money.

When you use Welding Set, Arc, Inert Gas Shielded, that's found in your No. 2 Supplemental Tool Kit, you sometimes run into trouble with the contact tube or welding wire guide tube.

You find that aluminum slag sticks to the tube opening. You can clean it off with a scriber or a file but you can only trim off ⅜-inch since the tube has to be 5 inches long and they're only 5⅜-inches long when they're new.

There's a cleaning compound containing sodium bisulphate which will remove the slag—and you don't have to file. It's called Nozzle Compound, Code 36346, Linde No. 65, Part No. 08N65 or 08N75. It can be local purchased from a Linde or Union Carbide distributor.




Lend an ear—you with the MIG welding rig, 'cause here's something that'll save you time and money.

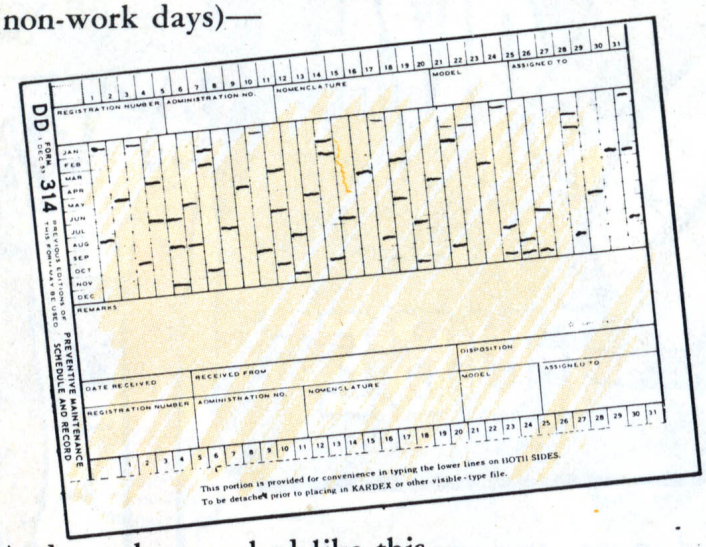
When you use Welding Set, Arc, Inert Gas Shielded, that's found in your No. 2 Supplemental Tool Kit, you sometimes run into trouble with the contact tube or welding wire guide tu

You find that aluminum slag sticks to the tube opening. You can clean it off with a scriber or a file but you can only trim off ⅜-inch since the tube has to be 5 inches long and they're only 5⅜-inches long when they're new.

There's a cleaning compound containing sodium bisulphate which will remove the slag—and you don't have to file. It's called Nozzle Compound, Code 36346, Linde No. 65, Part No. 08N65 or 08N75. It can be local purchased from a Linde or Union Carbide distributor.

# A WINNING CARD

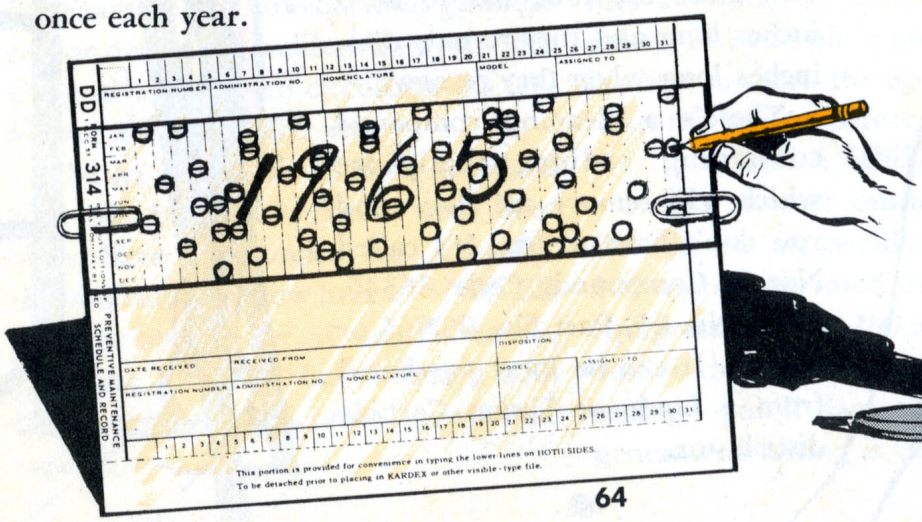
A DD Form 314 marked like this (non-work days)—




And marks punched like this—

Makes a fine template to guide you in marking all the copies of DD Form 314 you use.

Your big Bingo prize: All the time and sweat you save by having to figure out the non-work days only once each year.



# Connie Rodd's BRIEFS

## Report Quarterly—Except Aircraft

Hold that form! That DA 2406 or DA 2408-3, that is.

Except on aircraft—which stay on a monthly schedule—your DA 2408-3 report is **required** only quarterly, instead of the intervals spelled out in TM 38-750 and DA Pam 750-38. The word went out world-wide in DA Msg 993688 (17 Nov 64). But you don't need to let the 2408-3's stack up, even for aircraft. Any time a -3 is chock full, fire it in immediately. Close out entries are required only at end of the quarter. Your DA 2406—for everything—also goes on a quarterly schedule.

## Get Those Pamphlets

DA Msg 992995 (10 Nov 64) gave the word on some new DA pamphlets in the 750-series. They're designed for reading by soldiers and officers who are responsible for keeping equipment combat ready. Order copies of Pamphlets 750-1, 750-2, 750-3, 750-4 and 750-5 on DA Form 17. Then get your unit's DA Form 12-9 requirement for Logistics (General) pubs fixed so you'll get any new ones automatically via pinpoint.

## It Can Kill You

Hold one before you toss any clothing or sleeping bags in coin-operated dry cleaning machines. At least one person died in a sleeping bag that was cleaned in one of those machines.

The cleaning fluid—perchlorethylene—can be deadly unless the fabric is completely dry and free of any smell of the fluid. As long as there's any dampness or odor from the fluid you've got to keep it outside or in a well-ventilated place—and never use it till the dampness and smell are completely gone.

## Get 'em Back

If you haven't got the word yet . . . let this be it. M409 and M410 shipping and storage containers are needed for your Nike-Hercules missiles. So send any extras you have up the supply line.

## Blower Protection

SB 11-586 (18 Aug 64) gives the word on a blower guard for the RT-246/VRC and RT-524/VRC receiver-transmitters. The guard, or cover, is for early-issue MT-1029/VRC mountings . . . especially those used in open vehicles. The SB has issuing details and shows a drawing of a properly installed cover.

**Would You Stake Your Life right now on the Condition of Your Equipment?**

YOU
ARE THE READINESS AGENT IN
ESC (EQUIPMENT SERVICEABILITY CRITERIA)
AND
TAERS (THE ARMY'S EQUIPMENT RECORD PROCEDURE)
• LEARN THE SYSTEM
• PINPOINT THE FACTS
• AND PASS THE WORD
TB 9-2431-171
TM 38-750
2408-3
2407
2400
HEY! WHO BELONGS TO THIS JEEP?